

MANUFACTURERS' RECORD.

[Name Patented 1889.]

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXIII. NO. 17. 1
WEEKLY.

BALTIMORE, MAY 26, 1893.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

An Important Land Case Decided.

Readers of the MANUFACTURERS' RECORD will remember an article recently printed concerning the manner in which Virginia and West Virginia land titles had become clouded by grants which overlapped each other, and how this situation was still further complicated by sales of forfeited lands under the tax laws and the reclaiming of it by the original owners till many tracts of valuable property were put into an almost inextricable tangle.

A decision made by Judge Nathan Goff in the United States Circuit Court at Charleston, W. Va., last Saturday in a case of this kind will have a very salutary effect and will lift the clouds from the titles of thousands of acres of land, unless the decision should be reversed by the Supreme Court, which is not deemed likely by prominent attorneys who have studied the case. The suit in question was styled Reed vs. Dingess, and the plaintiff sought to recover from the defendant a large tract of land which had been sold under the West Virginia school-fund law for unpaid taxes. This law provides that where land is not entered upon the tax books or taxes are not paid upon it for five years, it shall be deemed forfeited and sold. In this case the land in question was purchased by Dingess from the school commissioner at such a sale. Later Reed, the trustee of the Sewan estate, of which it was a part, sued to recover it. The land was also part of three tracts surveyed and ordered sold, which included, respectively, 500,000, 100,000 and 174,000 acres, and which comprised nearly the whole of Logan and parts of Wyoming, Boone and McDowell counties, W. Va. At the time these lands were sold by the school commissioner they brought ten, fifteen and twenty-five cents an acre. They are now estimated to average \$8.00 an acre.

The court holds that the law is valid, and that by non-compliance with it the former owners have lost all claim and the new owners have acquired good title to it.

Transmission of Electric Power.

A paper read before the New England Cotton Manufacturers' Association by C. J. H. Woodbury, at its recent meeting, treats of the transmission of the electric current and its use for power in factories and mills.

In speaking of the gradual change from the direct to the alternating current which has been taking place for some time past among manufacturers of electrical machinery, Mr. Woodbury gave a brief description of the general principles involved in alternating generators and motors, and stated that this type of machine was to be used in the transmission of power from Sewell's Falls, N. H., four miles north of Concord, to the latter city and to the factories which might be erected near the falls. Among the works which will use it is that of the Page Belting Co., which now has power distributed through its shops in electric motors, which, according to a statement from the president, costs 20 per cent. less than steam-power.

One of the most remarkable successes in the transmission of power by electricity is at the Dunnell Print Works, Pawtucket, R. I. Here a motor was applied to a seven-roll

printing machine. It has not only been satisfactory, but is today giving better results than any other method employed at the works of driving such a machine. In the electric-light plant of the same factory an Edison lighting machine with a separate exciter is employed to drive a motor placed on the printing-room platform. This device has been working eighteen months with excellent results. By its uniformity of rotation the cloth is printed with 50 per cent. more speed than by using steam-power. The driving is under absolute control, and the cloth can be moved an inch if necessary. There is an absolute gradation of speed from one point to another without any shock. These changes can be made so uniformly that the "doctor" never cuts into the copper roll. In its operation no technical skill is needed. The uniformity of motion is such that it can be seen by anyone watching the machine, and particularly the absence of chattering in the gears. All printing machines are necessarily stopped a short time for changing rolls and other purposes, but considering this the entire production of the mechanism operated by the electric motor is a third more than that of a steam-driven machine. When it is considered that a print-works plant is worth more than \$50,000 a machine, the value of the electric system and its profit is seen at a glance.

Mr. Dunnell, who introduced the system in the plant, believes that all the power in such a factory, if one were to be built with the idea of utilizing the best and most economical power, should come from these electrical motors.

In connection with this system of power transmission, a portion of the current can be used for electric lighting without any interference with the motor. The motors can also be started and stopped without the exercise of any particular skill, and can be protected from dirt and dust by a case, in which the only openings are for the shafting.

A very interesting illustration of electrical power transmission is also given at the Crocker-Wheeler Works, Ampere, N. J. Here a pair of copper rods answer the purpose of line shafting. From them connections are made at will to motors operating machine tools in various parts of the place. In some instances it has been preferable to drive short lines of shafting by motors and to belt down in the usual way. In the first case the motor is attached directly to the machine; for instance, under the headstock of a lathe, instead of using the cone pulleys for variation in speed or the clutch for reversing the direction of the motion. The lathe to which the motor is attached is controlled by the operator in a manner similar to that by which the direction and speed of an electric street-car motor is controlled. Incandescent lamps are lighted by the same power and can be placed wherever the operator desires.

This application of electricity in machine shops is significant as showing how far the current may be used in replacing the present system of shafting and belting driven by a steam engine.

THE Citizens' Bank of Johnson City, Tenn., has closed its doors and will go into liquidation. Its assets are reported to be \$78,000, and liabilities only \$38,000.

Notes on West Virginia Development.

[From our own Correspondent.]

CHARLESTON, W. VA., May 23.

The Ohio River Railroad, which was shown at its stockholders' meeting last week to be in such good condition financially and otherwise, has ordered a lot of new passenger cars for use on its line, which now runs continuously from a connection with the Pennsylvania system at Wheeling to the Chesapeake & Ohio at Huntington and the Norfolk & Western at Kenova, making it one of the longest and best connected roads in West Virginia. The company is making preparations for improvements in its freight service also, and will soon be making a splendid showing in the matter of delivering freight on express time. Its two connecting lines, the Ravenswood, Spencer & Glenville and the Huntington & Big Sandy, the bonds of both of which are guaranteed by the Ohio River road, are doing nicely and are building up country which was undeveloped before their advent. The bonds of both lines are quoted in the market at par with accrued interest, a very good showing for lines which have hardly gotten started. Both these lines earned more than their fixed charges last year.

Hon. James A. Hughes and J. H. Millender, of the J. H. Millender Lumber Co., have purchased the standing timber on a large tract of land lying on Turkey creek, a tributary of Tug river, in Logan county, this State. A contract has been made with Horace Millender for getting the timber out, and tramroads will be built from the land to the Norfolk & Western Railroad for delivering the logs, unless it be found more advantageous to float them out by way of the Tug river. The timber will be sawed at the mills of the company at Ceredo.

The extension of the Kanawha & Michigan Railroad up the Kanawha valley, which is to connect it with the Chesapeake & Ohio, is almost completed. The roadbed is done and the work of laying the steel is pushing rapidly towards Kanawha Falls. Trains may be running by the first of next month.

The Independent Bung Co.'s factory at Central City, near Huntington, has gotten to work in full and is turning out a large product. This is an old West Virginia industry rehabilitated, having been burned out at Elizabeth, Wirt county, about a year ago.

The consolidation of the coal interests along the West Virginia Central Railroad does not seem to have scared out any of the smaller ones, and new companies are being formed to operate in that field. Several of these are reported forming and one was chartered last week. This was the North Branch Coal & Coke Co., which will operate at Bayard, Grant county. The incorporators are all well known to the coal industry of West Virginia, and the company has large holdings of coal land in that section. There is reason to believe that there will be several new concerns put to work in this region within the next few months.

Coal traffic at and about Fairmont, which is locally known as the Fairmont or Upper Monongahela river region, has shown a very decided increase of strength within

the past few weeks. The mines are all on full except a few which are closed down for reasons other than light demand. The great difficulty experienced is lack of shipping facilities, owing to the inability of the railroads to furnish cars as they are wanted. One day last week the output moved from Fairmont by the Baltimore & Ohio Railroad was 358 cars, and it is asserted that it would have been half as much more had the cars been available. The development is further shown by the increase in the railroad force which has become necessary at Fairmont. Three years ago an agent, one assistant and two operators were able to do the work; today forty-four men are required to handle the business offered.

As the development goes on banking institutions are needed at points which a few years ago had no more use for banks than for stock exchanges. The latest town to feel the need of and secure a bank is West Union, Doddridge county. This bank will get into operation within a few days in a new building of its own. It is solid and well-backed. Its existence is due very largely to the discovery of oil in that county and the rapid development of the field. While speaking of oil it is not out of place to mention that the Sistersville oil field, in Tyler county, is today producing more oil and as good a quality than any field in the United States. This field has created more wealth in less time than any oil field ever discovered in West Virginia. The wells are nearly all good producers and very little is lost by dry holes. The Wirt county field is said to be coming to the front very satisfactorily and to be promising of good results.

It is reported that the Bayard Coal & Coke Co., operating mines at Bayard, Grant county, will make some extensive improvements, notably the erection of a large block of coke ovens. The company has a capital stock of \$500,000, of which \$150,000 has been paid in.

As an indication of the difficulty the railroads have in the matter of keeping the mines supplied with cars, an instance may be cited at Pocahontas, where 300 miners have been laid off because the product cannot be disposed of by the railroad. It is not altogether the fault of the railroads either, for the mining industry is making very rapid strides and the railroads find it hard to keep up.

Quite a number of new coke ovens are being built at the different mines along the Norfolk & Western Railroad. The increase in number of ovens for this year will be something in the neighborhood of 2000.

For the month of April the shipments of coal and coke from the Pocahontas and Clinch Valley divisions of the Norfolk & Western Railroad was 300,023 tons, the largest month in the history of the regions. This was made with some of the mines off and others in want of cars.

Men to work in the mines and timber camps are hard to find in West Virginia. Advertisements are seen in many of the country papers for men to build railroads, to get out timber and work about the coal mines. Intelligent immigrants are needed and will find steady work at better wages than are paid for the same class of work in the cities, while the expenses of living are much lighter.

It appears that the pine-bark beetles,

which have caused so much trouble in some sections of West Virginia, are not to be disposed of very easily. It is said that swarms of insects which lay the eggs from which the beetle is hatched are seen in some sections, and that they are distressingly prolific.

A Coal and Iron Company Incorporated in Tennessee.

Articles incorporating the La Follette Coal & Iron Co. with a capital of \$2,500,000, and the La Follette Land & Improvement Co. with \$1,500,000 capital, were filed at Jacksboro, Campbell county, Tenn., on the 20th inst. Among the incorporators are H. A. Follette, president of the Fidelity Insurance Co.; S. R. Holl, president State board of Indiana; James R. Henry, banker; E. J. Robinson, capitalist, of Indianapolis, Ind.; Paul S. Keller, banker, Philadelphia; J. E. Keller and E. T. Warner, of Kentucky, and B. H. Enos and A. E. Davis, of New York city. The company has purchased 50,000 acres of coal, iron and timber lands in Campbell county, including the Big Creek Gap property, where extensive operations are to be conducted in the mining of coal and manufacture of coke and iron. Electric plants, with a capacity of 10,000 tons daily, are to be used in mining coal, of which eight varieties are found on the property. A number of coke ovens and possibly an iron furnace may be erected within a distance of a mile and a-half. An industrial town to be known as La Follette is to be built on the company's property to facilitate the development of the surrounding property. A railroad from Cumberland Gap to Chattanooga and Atlanta is talked of by English and Holland capitalists, giving the company an outlet for its product.

A Large Tannery for Bristol, Tenn.

Negotiations have been pending for some time between a land company in Bristol, Tenn., and Chas. A. Schieren & Co., of Brooklyn, N. Y., relative to the establishment of a large tannery in Bristol. These have finally resulted in a successful consummation, and on May 13 the papers were signed and delivered. The tannery will be one of the largest in the South, having a capacity of 30,000 hides per annum, which will be increased later on to 60,000.

The site for the plant was purchased from the Bristol Land Co., on the Virginia side of the city, and comprises ten acres, with Beaver creek flowing through it. The erection of the buildings will be commenced at once, and will include the main building 65x250 feet, two buildings 40x150 feet, large office building, hide storage-house, oil and lime storage-house and a number of bark sheds. These buildings are to be of the most substantial character, several of them being of brick and stone.

Louisiana Rice at the World's Fair.

The efforts to bring Louisiana rice into prominence at the World's Fair are meeting with hearty co-operation in the State. The fund thus far raised for the purpose is \$12,900, of which \$2000 was recently received from A. C. Hutchinson, president of the Southern Pacific Railroad, as its contribution. It is proposed to distribute fancy quarter-pound packages of rice to the visitors, and in each package will be recipes detailing some of the dishes which can be cooked with rice as the basis. There will also be pretty souvenir books which will detail the mode of rice culture and give a large number of recipes for the preparation of the cereal, and these souvenirs will be reserved for the ladies who display any special interest in the matter. By the time the fair is over it is expected that Louisiana rice will be in demand all over the United States and the market be broadened to a very large and profitable extent.

The Banking Institutions of Charleston, S. C.

By Col. I. W. Avery.

No city in the United States has more solid financial institutions and sounder banking methods than Charleston, S. C.

The rules and practices of conservative yet successful finance are inexorably followed, with the universal result of safe management, steady growth, large profits and an unbroken absence of failures, or even temporary mishaps.

Risks are never taken, while enterprises are liberally helped to the safety point and there judiciously stopped. The banks all pay good dividends, build up handsome growing surpluses, and their stocks rise in value. Reserves are kept where they should be, and solvent accommodation is never under any circumstances departed from or abused.

Any safe and profitable home project can get all of the money backing in Charleston it needs and should have. It is simply amazing what amount of money can be called upon for gilt-edge and legitimate city ventures. A leading banker was sounded on this possibility, and he promptly and positively responded that he could concentrate \$6,000,000 of available money in a short time in the city.

Banks are so safe and successful under the methods in vogue that new ones are springing into existence and rapidly get established.

There are now fifteen banks in successful operation, three national, four State and eight saving banks, besides eleven flourishing building and loan associations and some private money lenders. The banks have \$1,535,300 capital, \$830,000 surplus and \$7,656,000 deposits. The deposits increase from \$1,000,000 to \$2,000,000 yearly, evidencing the growth of trade. Probably no set of banks in the South will show as low a rate of loss from discounts, proving the care in making loans, the rigid enforcement of rules for security and the high financial standards prevailing. The following are the names of the banks:

Name.	Capital stock.	Surplus	Deposits.
People's National...	\$250,000	\$157,500	\$500,000
First National...	200,000	200,000	600,000
Bank of Charleston...	200,000	100,000	800,000
Loan & Trust Co...	250,000	61,000	726,000
Miners & Merchants'	100,000	11,000	220,000
Germany Savings...	40,000	100,000	1,900,000
Hibernia Savings...	30,000	16,000	174,000
Carolina Savings...	200,000	100,000	1,100,000
Exchange Banking			
& Trust...	100,000	.....	175,000
Security Savings...	50,000	9,000	81,000
State Exchange...	30,000	3,000	106,000
Charleston Savings...	30,000	30,000	316,000
Dime Savings...	30,000	5,000	236,000
American Savings...	15,000	7,000	86,000
Nickel Savings...	10,300	500	12,000
Total.....	\$1,535,300	\$830,000	\$7,656,000

Charleston has a number of active, prosperous and well-managed building and loan associations in successful operation that handle a large amount of money in the useful way of such financial institutions, investing the earnings of laboring and salaried men and adding to the homes of the city.

In the last year thirteen of these valuable organizations were in existence, taking in the sum of \$754,590, saved out of wages and put into tax-paying improvements:

Name.	Shares.	Paid in last year.
Fidelity.....	4,000	\$39,200
Banking System...	1,200	33,600
Southern, of Huntsville...	1,800	19,300
Paragon.....	1,500	162,000
Assistance.....	1,500	142,000
Safety.....	1,500	.....
Homestead.....	1,000	70,000
Germany.....	1,250	83,750
Workingman's	2,000	90,000
Economy.....	1,100	44,000
Hibernia.....	1,200	36,000
Acme.....	1,200	21,600
Household.....	595	7,140
Total.....	19,845	\$754,590

An illustration of the admirable banking done in this solid, conservative old city, it may be stated that the stock of the

First National Bank has reached the value of \$235 a share; the People's National Bank, \$210; the Bank of Charleston, \$170. The increase in deposits of 1892 over 1891 ran to \$2,487,000.

With her solvent, reliable and powerful banking system backing her varied commerce, fortified by a fine ocean, river and railway transportation service, and strengthened by her massive and growing truck, phosphate and fertilizer industries, Charleston, with her deepened harbor fitted for the largest vessels, and under the mighty stimulus of foreign direct trade, will grow to the commercial dignity that belongs to her by right of her superior natural advantages.

The Financiers of Two States.

Two notable gatherings which have just adjourned were those of the Texas Bankers' Association and the Tennessee Bankers' Association. The banks of the two States were well represented, and the scope of discussion included national as well as State topics. A significant feature of both gatherings was the action in favor of repealing the Sherman silver-purchase law. A resolution to this effect was passed by both bodies.

The Tennessee bankers met at Knoxville and listened to the usual official reports, which were accepted as satisfactory. A resolution that the law relative to national-bank currency should be so amended as to allow each bank to issue currency equal to the amount of United States bonds purchased was adopted. The repeal of the 10 per cent. circulation tax law was opposed by a majority vote. The officers for the next year are as follows: President, H. C. Branner, Knoxville; vice-presidents, G. N. Henson, Chattanooga; Herman Justi, Nashville; F. O. Watts, Union City; treasurer, J. H. Smith, Memphis; secretary, John W. Foxon, Chattanooga.

A paper on the "Hoarding of Public Money in the State Treasury" excited much attention at the Texas convention, which was held at San Antonio. M. Lasker, of Galveston, its author, advocated the distribution of \$1,000,000 now in Texas vaults among State depositories at interest. In five out of six Southern States he found that heavy losses had been sustained through defalcations of State treasurers, due to the fact that the public fund had not been placed at interest in some depository. The association by vote favored the repeal of the 10 per cent. tax on State banks, but opposed State banks of issue. The election of officers resulted in T. J. Groce, of Galveston, being chosen president; A. S. Reed, of Ballinger; J. F. Miller, of Gonzales, and J. E. McAshan, of Houston, vice-presidents; J. E. Longmoore, of Rockdale, secretary, and W. Goodrich Jones, of Abilene, treasurer.

Plans for the New Orleans Bridge.

The plans and specifications for the new bridge to be built across the Mississippi river above New Orleans were received in that city on the 17th inst. by Capt. John Mills, the engineer in charge of the fourth district, with instructions to supervise the building of the structure. The exact location of the bridge has been determined upon, and will be located about a mile above Twelve-Mile Point, but owing to a curve in the river at that place the approaches on the east bank will run parallel with the river for two or three miles up to within about a mile of Southport. On the west bank the approach takes a northerly course through the Willswood plantation and then runs parallel with the Texas &

Pacific track. According to the soundings the river is eighty-four and eighty-seven feet deep near the centre, and about midway between the centre and the west bank 100 feet, and near the west shore fifty-four feet. The depth near the east shore is eighty-two feet, and velocity near the centre six and a-half feet per second. The

bridge is to be built with unbroken and continuous spans between the river banks, and with but two piers in the river. The approach on the west side of the river will come from the Southern Pacific and Texas Pacific railroads, and on the east side from the Illinois Central and Yazoo & Mississippi Valley. The bridge will be eighty-five feet from the water, and will consist of three spans, two of 610 feet and one of 1070 feet.

New Development Company in East Tennessee.

Another part of Tennessee which is reported to be rich in iron-ore and timber lands is to be developed through the efforts of residents of Johnson City, Tenn., assisted by outside capital. What is to be known as the Contract & Finance Co. of Johnson City has been organized with \$150,000 capital. It has secured a large tract of land in the vicinity of Johnson City, and hopes to induce iron and steel manufacturers to locate at this point. One of the objects of the company is to encourage immigration. It is understood that A. A. Arthur, of Middlesborough, Ky., will endeavor to attract foreign capital by personal efforts in England.

A. B. Bowman is the president, and E. E. Malcolm, the former assistant manager of the American Association at Middlesborough, the secretary and treasurer. The directors of the new company are Col. T. E. Matson, mayor of Johnson City; Major W. S. Campbell; J. Crandall, president of the First National Bank; A. B. Bowman, president of the Watauga Bank; Dr. W. M. Fuqua, C. F. Camp, N. C. Love, W. G. Mathes, W. L. McFarland.

Meeting of the Jacksonville (Fla.) Development Co.

A meeting of the directors of the Jacksonville Industrial Development Co. was held at the Board of Trade rooms in Jacksonville, Fla., on the 16th inst. Bids for the erection of a factory building and the sinking of an artesian well were considered by the board, and the executive committee was instructed to enter into such a contract as might seem for the best interests of the company. The matter of passenger and freight transportation was also discussed at length. The executive committee reported that it had conferred with the Florida Central & Peninsula Railway and that it was probable it would run a spur from its line near the cemetery to Habana City and establish a dummy line for the accommodation of passengers and freight between that city and Jacksonville. It was stated that the company's income was only about \$1000 a month. It was decided to erect a temporary wooden factory building for the El Modelo Company, which will cause some delay in the erection of the main factory building. The directory were well satisfied with the report of the executive committee and the amount of work accomplished since the last meeting of the board. President Dillon reported the receipt of a number of letters from different parts of the country inquiring for building sites for factories.

Gold Mining in Lumpkin County, Ga.

It is said that a pay vein of gold has been struck near Dahlonega, Ga., and no little excitement has been occasioned by the exaggerated reports as to its richness.

The Chestab Company has recently received five carloads of heavy pipe and other machinery for use at its mines, and operations will be pushed forward on a large scale.

The Gold Mountain Mill & Machinery Co. is reported to have struck several good leads and is developing so as to get matters in good shape for work during the summer.

Several persons have leased the old Lockhart property and mill, and it is expected that the plant will be put in operation shortly.

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

JOHN M. ROSS, of Knoxville, Tenn., recently made a large shipment of marble from his quarries near that place to the City of Mexico, where it will be used in decorating the public buildings now under construction.

CRIST. CLOUDY and John Klusmeyer, two employees of the Avondale (Ala.) Safe and Lock Works, which were burned several months ago, have started a plant of their own at Birmingham. They have several orders already.

THE representative of the Nordyke-Marmon Machine Co., of Indianapolis, has had a conference with the rice-mill committee at Crowley, La., and will at once ship the machinery for the new mill now building at that place.

THE town of Cisco, Texas, which was nearly destroyed by the recent cyclone, is being rapidly rebuilt. The State donated \$10,000 for its relief, and several of the merchants have begun putting up new buildings at their own expense.

THE lake created by the great dam at Austin, Texas, is now full of water and a stream nearly two feet deep pouring steadily over the top of the dam. The lake is nearly thirty miles long, and from one-fourth to half a mile in width.

THE French government solicits bids for about 9700 hogsheads of Maryland and 1500 hogsheads of Ohio tobacco. Samples of the kind required are to be seen at the French consulate in Baltimore. The contracts will be awarded in Paris, June 9.

A BOARD OF TRADE has been organized at Waxahachie, Texas, and the following officers elected: T. G. Cole, president; W. L. Harding, secretary, and S. W. King, treasurer. A committee of nine was appointed to prepare incorporation papers.

CONTRACTOR MOORE is about to commence the work of dredging Pensacola bar. The new hydraulic dredge Rittenhouse Moore, Jr., has arrived at Mobile, and arrangements have all been perfected at Mobile to push the work rapidly to completion.

TWO Texas cities, Houston and Waco, through their business men, are thinking of establishing bureaus of information at the Columbian Exposition, where the opportunities offered to merchants and manufacturers will be thoroughly advertised by capable agents.

THE strawberry crop around Knoxville, Tenn., has not been as heavy as anticipated, and will soon be over. Twenty-four-quart crates are now selling for \$3.00 to \$3.50. New peas in the same city are selling for \$1.50 per bushel, and new beans for \$2.50 per bushel.

THE board of health of New Orleans, after giving careful consideration to the proposed sewerage system to be adopted by the city, has passed a favorable report upon it, approving the plans and recommending that the work be carried on with all possible dispatch.

ANOTHER project for a fine hotel is being considered at Asheville, N. C. A recent transfer of property near the city was made in which Dr. S. Westray Battle, of Asheville, was interested. He writes to the MANUFACTURERS' RECORD that there is no prospect of beginning work on the hotel at present.

THE Georgia-Alabama Development Co. was recently sold by the receiver and bought in for \$160,000 by a new company

called the North Georgia Land & Manufacturing Co., of which O. F. Sampson is the president. It is the intention of the new company to push its affairs forward in a conservative manner.

THE South Texas Development Association met in Houston, Texas, on May 17. Reports were received from various committees, and some papers read relating to the development of that portion of the State. It was determined to organize the association on a business basis, and steps will be taken to secure a charter.

NEAR Monticello, in Drew county, Ark., there is a fine bed of aluminous clay which has upon trial proved to be particularly well adapted for making terra-cotta, tile and similar material. Capt. L. E. Morgan, of the town named, has examined many of the clay beds, and considers them eminently suited for the purposes indicated.

A SAMPLE of native cotton grown on the Sandwich Islands was recently received in Boston. In appearance it is somewhat coarse, with a long and strong staple and slightly tinged color. The seeds are quite small, with a dark surface. The cotton grows wild on the island, the plant resembling a small tree and bearing bolls all the year. As yet it has been used but little except by the natives.

THE Standard Oil Co. has commenced the erection of a plant at New Decatur, Ala. It will consist of two large tanks, holding 18,460 gallons each, one of which will contain prime white and the other fire-proof kerosene. In addition there will be a warehouse 20x30 feet in size to contain all the lower grades of oils in barrels or tanks; also cooper shop, a stable and a feed room. Pumping machinery will be installed for pumping oil into wagons.

THE orange packing-house to be built at Jacksonville, Fla., by Mr. George B. Usner and his associates will be the largest in the State. It is to be 250x75 feet and will be equipped with all the most modern appliances to facilitate the business of the extensive firm for which it is to be constructed. It will have side-tracks connecting it with every line of railroad in Jacksonville. The firm will have large branch packing-houses at several points in the orange belt.

AT the recent meeting of the Young Men's Business League of Memphis a number of addresses were delivered relative to the need of securing manufacturing establishments for the city. A list of those which had been secured through the efforts of the league was read, and also the names of others with which negotiations are now pending. The members agreed to give hearty support to the work and use every effort to add to the industries of the city.

SENATOR PROCTOR, of Vermont, on a recent visit to Knoxville, it is said, selected several sites for the erection of extensive marble mills in the vicinity of that city. Knoxville parties interested in the enterprise with Senator Proctor have not made any final choice of location, and in the meantime the machinery for the mills has been ordered. At the start twenty-four gang saws will be operated and the capacity of the mills increased as work progresses, constituting one of the largest plants of the kind in the country.

THE Georgia Exposition Co. has agreed to pay the Georgia State Fair Association \$3500 to hold its fair in Augusta during the progress of the exposition, which opens October 17 and closes November 17. It is expected that the exhibits of Augusta's cotton factories, foundries, machine shops, factories, flour mills, marble works, brick and tile works and other manufacturing concerns will be more extensive than ever

before, whilst the agricultural, horticultural and floricultural features of the exposition will be of a high order.

THE Maryland exhibit at the Columbian Exposition is nearly complete. In the main hall of the State building are photographs of the city of Baltimore and points of interest in it; also a topographical map of the State. In the centre of the room is a large tank, nine by twelve feet, containing oysters and terrapin. Models of oyster boats float also in the water, and a model of a Baltimore oyster-house and wharf at one end. Pictures representing the oyster industry in every stage are near at hand; also many oyster curios. Another part of the building is given up to work of Maryland women.

THE Piedmont Belt Mining Co. was organized at Rock Hill, S. C., last week. The incorporators are Fred Mobley, W. B. Wilson, Jr., and John Ambler, of Virginia. The object of the company is to do a general mining and manufacturing business. The mining machinery has already been procured, and operations will be commenced at an early day. Its first operation will be in the development of gold and pyrite mines located near the city. These mines are pronounced by experts to be rich in gold and pyrites, the ores of some of the mines carrying from \$10.00 to \$40.00 in gold.

THE bureau of docks and yards of the Navy Department at Washington, D. C., is having plans prepared for a dry-dock at Algiers, La. After the plans have been completed the site at Algiers will be examined to ascertain whether it is extensive enough to accommodate the dock and answer the purposes in view. The amount appropriated in the last naval appropriation bill was only \$25,000, which is enough to pay the cost of the initial steps in the undertaking. The department will submit a report to the next Congress on the matter, with estimates of the amount of money required to carry forward the work.

THE following allotments from the appropriation to improve the Mississippi river have been made by the Secretary of War: Levees \$40,000, in addition to the \$1,500,000 already placed at the disposal of the Mississippi river commission; for surveys, gages and observations \$100,000; for first and second districts—Plum Point reach \$240,000, Plant Point reach \$179,000, dredging experiment \$40,000, Hopefield bend \$100,000, surveys, gages and observations \$8000; third district—stone \$100,000, plant \$113,000, Lake Bolivar \$15,000, surveys, etc., \$12,000; fourth district—surveys, gages and observations \$2,000; total \$2,665,000.

A. L. JONES, an expert in the hop-growing business, has been traveling through North Carolina to ascertain if the section is favorable to raising hops. He went through Henderson, Kittrell, Raleigh, Southern Pines and other towns in that locality, and is reported as being highly pleased with the climate and condition of the soil. He believes that the hop industry will be added to North Carolina's pursuits, and that some of the New York State growers will eventually locate there. In central New York thousands of acres are given up to hop yards. Mr. Jones says that the North Carolina hop cakes are better than those from Northern fields.

A LARGE meeting was held in Pensacola, Fla., on the 14th inst. to consider the feasibility of establishing a line of fruit steamers between that port and Boca del Tora. S. F. Keller, of Birmingham, representing a company now operating a line of steamers between Mobile and Bluefields, appeared before the meeting and offered to establish a line provided the citizens of

Pensacola would guarantee the company a bonus of \$2500, payable in six months after it was started. Messrs. H. T. Wright, W. H. Knowles, J. W. Lurton, A. C. Blount, Jr., and V. A. Moore were appointed a committee to inquire into the matter and formulate a plan to be reported to a meeting of the Chamber of Commerce, to be called by the president.

THE sale of the Chamberlain Hotel at Fortress Monroe, Va., on the 18th inst. took place at noon in the hotel building. There were a number of capitalists present and but few bidders, the first bid being \$240,000, made by O. G. Staples, of Washington, D. C., which was raised to \$250,000 by W. E. Boyentown, of Hampton, Va. The bids were carried up to \$260,000 by John S. Tilney, of New York, for the bondholders of the Chamberlain Hotel Co. The property was declared sold to Mr. Tilney, which must be ratified by the court. In addition to the price bid there is to be added about \$85,000 due to the Edison Electric Light Co., which debt is assumed by the purchaser. Those familiar with the facts say the property brought only about 50 per cent. of the amount already expended upon it.

THE annual meeting of the stockholders of the Consolidated Tidewater Building Association was held in Norfolk on the 16th inst. The report of the secretary for the year showed the business of the association to be in a prosperous condition. A dividend of 5 per cent. was declared upon the earnings from the permanent investment stock for the six months ending May 16, 1893, making a dividend of 10 per cent. for the year. The following were elected a board of directors for the ensuing year: Samuel Davis, Thomas R. Colding, James Brown, Alexander Gordon, William M. Reid, J. C. Norcum, A. A. Corpree, James A. King, Southall Bass, J. F. W. Cannon and John Pugh. At a subsequent meeting of the board of directors the officers for the past year were unanimously re-elected as follows: Samuel Davis, president; Thomas R. Colding, vice-president; J. C. Norcum, secretary, and William M. Reid, treasurer and attorney.

Mexican Notes.

THE proprietary company of the Mexican Southern Railroad has refused to receive the road from the contractors on the ground that it is incomplete. The difficulty appears to be that heavy rains have caused a number of serious washouts and other damage. It is expected that the matter will be settled very soon.

THE government minister of communication has asked Congress to renew the privilege to the President to reform the railroad and harbor-improvement concessions without an increase of expense to the government, with the right to extend it until the reassembling. The chambers have also extended to the President the right for the same time to grant concessions of privileges to new enterprises entering the country.

THE annual meeting of the shareholders of the National Bank of Mexico was held in the City of Mexico on the 17th inst. The bank earned on its capital of \$8,000,000 last year \$1,839,418 net, and paid a 14 per cent. dividend to shareholders. It also paid \$85,000 to the council of administration and added \$433,941 to its reserve fund, making the present total reserve fund \$3,580,554. The directors say in their report that the business outlook is in general encouraging. Mexico has given unmistakable evidence of her vitality by successfully withstanding the difficult conditions created by the simultaneous failure of her staple crops and the unprecedented depreciation of her chief product, silver, on the foreign markets.

PHOSPHATES.

Solubility of Florida Phosphate.

Several months ago the MANUFACTURERS' RECORD published the results of a series of experiments made by the State chemist of Florida to determine the solubility of Florida phosphates in different mediums. In the annual report of the commissioner of agriculture, recently issued, the matter is treated upon at some length, and is of such general interest that it is here reproduced.

The method adopted was as follows: One gramme (15.4 grains) of very finely powdered hard-rock phosphate, containing 74.80 per cent. tricalcic orthophosphate, 3.30 per cent. of ferric phosphate and 2.98 per cent. of aluminic phosphate, was rubbed up to a cream with distilled water, and in a closed glass vessel subjected for five months to the action of one gramme of each of the following real or supposed solvents, previously themselves dissolved or suspended in 100 c. c. of distilled water (a little less than four fluid ounces).

The following results were obtained under the conditions named:

The water alone dissolved .64 of 1 per cent. of phosphoric acid.

The water with muriate of potash dissolved .58 of 1 per cent. of phosphoric acid.

The water with kainite dissolved .48 of 1 per cent. of phosphoric acid.

The water with sulphate of potash dissolved .46 of 1 per cent. of phosphoric acid.

The water with flowers of sulphur dissolved .45 of 1 per cent. of phosphoric acid.

The water with caustic potash dissolved 1.19 of 1 per cent. of phosphoric acid.

The water with nitrate of potash dissolved .48 of 1 per cent. of phosphoric acid.

The water with caustic lime dissolved none.

It requires only the most casual glance at this memoranda to see that, except in the case of caustic potash, no solvent action was produced by any of these supposed "solvents." The water alone dissolves more than it does when it contains these other substances in solution or suspension; in other words, they prevent, but do not promote, solution. In the case of the caustic lime this was especially marked. It may not be inappropriate in passing to observe that this inhibitory effect of the caustic lime is quite consistent with the view for some time entertained, that the solution of "bone phosphate of lime" in water is really the result of the decomposition of the latter, as truly as in the case of its treatment by a mineral acid.

If we accept the conclusions of Arrhenius, van't Hoff and other investigators, solution in water of most salts involve much more than the mere physical distribution of the particles of a solid among those of a liquid. Profound molecular changes, comparable at least to electrolytic dissociation, appear to accompany such solution. The precise part which in the above instance is played by the calcium hydrate may be somewhat obscure. It is quite conceivable, however, that the presence of an unsaturated excess of a powerful base like lime may so turn the balance of affinities as to entirely prevent those intimate molecular changes upon which the solution in water of tricalcic orthophosphate depends. At any rate the fact remains, as shown above, the presence of even presumably inactive salts apparently retards solution, while caustic lime locks up the phosphate in a condition of absolute insolubility.

It is not improbable that the facts given above may have more or less bearing upon the assimilation of phosphates as plant food. It is well known that the acids of the soil, carbonate of potash, and, under certain conditions, ammonia and ammoniated compounds, promote the solution of phosphates, while other substances, as above indicated, completely prevent or

more or less retard it. It is true that in fertilizers as ordinarily used the greater portion of the phosphoric acid is already in a "water soluble" state. This, it must be remembered, is an artificially induced and temporary state. How long it will take any given instance for the "water soluble" phosphoric acid to "revert" or go back to more basic forms is a matter depending on so many varying soil conditions that only approximate and conjectural estimates can be made. It is safe to say, however, that in most soils this "going back" process proceeds quite rapidly. The mechanical condition of these basic phosphates is no doubt greatly improved by their previous solution in acid. In all other respects, in chemical composition, in affinities, in solubility in soil water, save as effected by that improved mechanical condition, the ultimate products formed in the earth from phosphoric acid, in whatever form it is applied, are similar to or identical with the original phosphate "rock" from which it was derived.

One important practical inference from the above tabulated results may be noted. Quick or caustic lime should never be applied to the soil at the same time with phosphatic manures. A sufficient time should be given for the lime to be neutralized by atmospheric and soil acids.

In a caustic state lime renders the phosphoric acid absolutely insoluble in water. In the form of carbonate, except as it promotes nitrification and to this extent favors the solubility of phosphoric acid, its action upon the "water soluble" phosphates is simply to promote "reversion," a result which will come sooner or later in any event, and which is preventable by no known means.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, May 25.

While the local phosphate market may be written very quiet, there is a steady tone to values in sympathy with the improvement in the European market and the activity at producing points. Manufacturers of fertilizers are commencing to purchase more freely, and the receipts of the week have been larger than usual. The following arrivals are reported at the Merchants' Exchange: Schooners Nellie Howlett, from Port Royal, S. C., with 825 tons of phosphate rock; Mary S. Bradshaw, with 550 tons; S. B. Marts, with 850 tons; Blanche Hopkins, with 975 tons, and B. F. Lee, with 625 tons, all from Charleston, S. C. There are no charters reported, and freights are steady and unchanged, with a scarcity of handy-sized tonnage. At the close prices are steady and not materially changed, as follows: Ashley river rock is quoted \$4.75 and Charleston \$5.00, and for future delivery \$4.00 to \$4.25 for 50 to 55 per cent. product; Florida river pebble, 60 per cent. product, is quoted \$4.00 to \$4.25 f. o. b., and land pebble, 67 to 70 per cent. product, \$5.00 to \$5.50 f. o. b.; Florida hard rock is firm at \$8.50 to \$8.75 f. o. b. Fernandina.

FERTILIZER INGREDIENTS.

In the local market business is moderately active, with no material change to note. There is more activity in Eastern markets for ammoniates, and with a future decline in blood to 2.20 Chicago. We note more freedom in purchases by Eastern manufacturers for all kinds of ammonial matter. There are no sales of the new catch of fish reported, and the number taken is, so far, very short. We quote as follows: Blood, 2.30 to 2.35 per unit Chicago; tankage, 7 per cent. of ammonia and 25 per cent. bone, is steady at \$25.00 to \$26.00 per ton Baltimore, and 9 per cent. of ammonia and 20 per cent. bone is firm at \$27.50 to \$30.00; brimstone, best unmixed seconds and thirds, \$18.50 to \$20.00; nitrate of soda, 2½ cents per pound and 2.20

to arrive; kainite, \$11.50 to \$12.00 per ton of 2000 pounds in bags; muriate of potash, \$1.85 per 100 pounds.

CHARLESTON, S. C., May 22.

The volume of business in phosphate rock begins to show signs of increasing activity as the season progresses, and the market during the week has been very steady, with holders a shade firmer in their views. The demand is expected to commence earlier than usual, and already some large sales have been made for early future delivery. The shipments for the week embrace some of the leading Northern ports, with the foreign demand lighter than usual. The clearances were as follows: Brig Jennie Hulbert, for Norfolk, with 710 tons of phosphate rock; schooner Carrie L. Godfrey, for Wilmington, Del., with 650 tons, and the schooners B. F. Lee with 620 tons, S. B. Marts 804 tons, Mary S. Bradshaw 500 tons and Louis A. Gront with 250 tons, all for Baltimore. The New York steamers carried out 200 tons of phosphate rock. In the list of values crude rock is quoted \$3.75 to \$4.25 f. o. b., hot-air-dried \$4.75 to \$5.00 f. o. b., and ground rock \$7.50 to \$7.75 f. o. b. in bags. Freights on rock are very firm, \$2.40 per ton and loaded having been paid to New York.

The comparative exports of crude phosphate rock and ground from the port of Charleston from September 1, 1892, to May 19, 1893, and for the same time in 1891-92, are as follows:

Destination.	1892-93.		1891-92.	
	Crude.	Ground	Crude.	Ground
Baltimore.....	28,184	.....	25,136	.....
Philadelphia.....	11,243	.....	12,538	.....
Boston.....	.....	.....	850	.....
Elizabethport.....	.....	.....	.....	.....
Wilmington, Del.	5,033	.....	600	747
Barren Is., N. Y.	6,717	2,041	9,223	2,234
New York.....	1,835	.....	2,057	.....
Weymouth.....	10,220	.....	17,107	.....
Richmond.....	4,999	.....	6,014	.....
Sanford, Del.	1,200	.....	1,200	.....
Newton Crk., N. J.	1,078	.....	1,078	.....
Wilmington, N. C.	665	.....	450	.....
Welsh Point.....	.....	.....	.....	.....
Orient, L. I.	.....	.....	1,860	.....
Other ports.....	4,920	.....	3,290	300
Total exports.....	76,094	2,041	83,106	3,281
By railroads.....	.....	.....	35,600	1,013
Foreign ports.....	175	.....	442	.....
Grand totals.....	76,269	2,041	119,148	4,394

FERTILIZER INGREDIENTS.

There is a quiet tone to the market generally, as usual at this season of the year, and the tone of values is nominally firm. At all fertilizer centres there is a lull in trade, and manufacturers are not purchasing yet for next season's business. Stocks of products in the West have been taken by Western buyers, and prices have kept very steady. Blood, tankage and fish scrap are scarce and prices firm. Brimstone to arrive is quoted \$20.00 per ton for best unmixed seconds; nitrate of soda direct per 100 pounds is held at \$2.50; kainite is steady at \$12.00 to \$12.50; ash element and ash phosphate are steady at \$12.00 to \$12.50.

Phosphate and Fertilizer Notes.

THE barkentine Julia cleared from the port of Tampa, Fla., last week with 1110 tons of phosphate for Philadelphia. The British ship Abandana is loading phosphate for New York.

A PETITION for a receiver for the Georgia Phosphate & Land Co. was filed on the 18th inst. at Atlanta, Ga., by the attorneys for the Perkins Machinery Co., Southern Belting Co., De Loach Mill Manufacturing Co. and the Standard Oil Co.

THE steamer Weatherby arrived at Fernandina on the 14th, and is loading with phosphate rock. The British steamship Parklands arrived on the 18th, and will be loaded with 1600 tons of phosphate rock by Agent Marshall for the Dunnellon Phosphate Co.

THE Merrill-Stevens Engineering Co., of Jacksonville, Fla., has closed a contract to

build another dredge for the Pebble Phosphate Co. It will be fitted out with an eighty horse-power Scotch boiler, with patent circulating pipes and a Morris Machine Works high speed engine. The dredge will have a capacity of about 150 tons per day.

THE secretary of state on the 20th inst. issued a commission to the Rose Phosphate Co., of Charleston, of which Morris Israel, Ernest H. Pringle, George M. Trenholm and E. R. Guerard are corporators. The capital stock of this company will be \$37,000, divided into 375 shares at \$100 each; payable 66⅔ per cent. in cash.

FREIGHTS on phosphate rock from Fernandina, Fla., to the Continent were reported on the 18th at \$3.63 from distance of 4000 miles; from Dunnellon to Fernandina, gross expense aboard ship, \$3.57, of which \$3.27 goes to the Florida Central & Peninsular for handling freight.

Engineering Association of the South.

On the occasion of the regular monthly meeting of the Engineering Association of the South at Nashville, Tenn., May 11, the resident members extended their courtesies to the non-resident members in an excursion to some points of technical interest near Nashville. In the forenoon visits were made to the extensive new shops of the Nashville, Chattanooga & St. Louis Railway, to the city reservoir and to the power plant of the combined street railroads. After dinner was served the party, about sixty in number, spent the afternoon in an excursion on the river, visiting the city pumping station, the most recent electric-light plant, the site of the lock now under construction on Cumberland river bridges.

At the evening session a discussion followed on the durability of yellow pine. Mr. Hunter McDonald thought that yellow-pine timber is not so durable now as formerly, ascribing as a reason, among others, the common practice of tapping pine for turpentine, also the fact that much of this timber comes from "old field" pine, a secondary growth which has followed the clearing of the original forests. He thought the theory that tapping removed the turpentine from the sap portion and not from the heart erroneous, and that the whole was made more open for the absorption of moisture. He mentioned some bridge timbers of pine not tapped which were still sound after fourteen years' service, while nearly all the pine timber now has to be renewed in five or six years. He does not now paint the wooden members of bridges, but houses them, allowing free air circulation. In the Tennessee river bridge at Johnsonville are timbers housed and sound after twenty-one years' use. He believes that if timber could be protected for two years, then thoroughly painted, it would add four years to its life. He finds more difficulty in judging when a stick is unsafe from decay than in protecting it, and thinks some practical test of timber in use would be of great benefit.

Mr. W. C. Smith agreed that timber when from original forest and not tapped lasted better than otherwise, and called attention to the hastening of dry-rot by confining timber in walls. The confined ends of joists have rotted in nine months, while the rest was still good. In his practice he either leaves air space around the ends of joists or builds projecting bearings for them. Poplar lumber sawed from river rafts he found decayed in two years when exposed to the weather, but lasted well on interiors. A number of other interesting facts were elicited by the discussion.

Next meeting will be held June 8 at the rooms of the association, Cumberland Publishing House Building, Nashville, Tenn.

WALTER G. KIRKPATRICK, Secretary.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Cottonseed Oil in Holland.

ROTTERDAM, May 12.

Editor Manufacturers' Record:

The market for cottonseed oil has been firmer the last week, and some business has been done at improved prices. A large parcel has been sold at thirty-eight cents, and the last days of this week forty cents ex warehouse has been paid. This price is still obtainable for choice butter oil, but a good part of the owners are not inclined to sell at the actual prices, and quote forty-two to forty-three cents.

America reports that stocks are small, and that we cannot expect many arrivals of good oil. The prices of lard are again considerably higher, and America reports that we shall see still higher prices, so it is probable that the lard-makers (refiners) will use much cottonseed oil. On our side the butter-makers are not inclined to pay high prices for oil, and it is not probable that we shall see paid much higher prices for cotton oil. Prices of butter remain low everywhere; therefore the butter-makers who cannot obtain high prices for butter are not inclined to pay high prices for the raw material. In summer the manufacturers of butter don't use much oil; the prices of oil are high, so the owners will do well to take advantage of the actual better condition of the market.

G. W. SANCHES.

The Cottonseed-Oil Market.

NEW YORK, May 24.

Editor Manufacturers' Record:

It has been a poor week for cottonseed oil. It has been almost impossible to sell even small lots, although they have been offered at radically lower prices, and especially towards the close. It has been shown that with the rise or fall of trading in compound lard, so oil will fluctuate, and notwithstanding any remarkable low condition of stocks of oil as at present. The compound lard business has been steadily falling off for about three weeks, and now amounts to little, while the lard refiners are well supplied with oil as against the current movement.

The West had bought freely of oil latterly, as had been noted, and they are protected against even some increase of trading in compound lard, while the local producers have accumulations sufficient to prevent their worrying over purchases of oil unless there is a marked increase in their trading, and which is altogether improbable for the near future, with the warm weather and the fact that foreign markets will first work off their accumulation of the compound product, which are full from recent extensive buying.

There has been some talk here that the Mediterranean might in the near future come upon this market for supplies, because of the fact that its holdings of oil are light, and especially about Trieste, which market is almost bare of stock, but this is not likely, and for the reason that it has been running more this season upon the English markets for supplies, where at present it is able to get grades to suit them at from thirty-eight to forty cents. Genoa, which is represented as carrying a remarkably small stock, has been distributing its receipts of oil promptly as received to the interior and near foreign markets, and there is no indication that it will pursue other than a conservative course or appear upon this market with orders. The only point from which export demand may come is Holland, and that market is supplied for the present. It would appear then that the oil market will do better in trading only as the compound-lard trade

improves. Everything going into the article is very dull and much lower, with talow down to five and a-quarter cents and oleostearine freely offered at nine cents. With the hot weather orders have been received for pure lard, both raw and refined, taking away just so much trading in the compound article. New York is the lowest market in the country on oil, yet there is weakness all around. Efforts have been made to sell small lots of prime crude at forty-two to forty-three cents and prime yellow at forty-six and a-half to forty-seven cents without success, except of a lot of 175 barrels of summer yellow at forty-six and a-half cents; yet, at the same time, if there was a buying order of any consequence here there would be a recovery from these figures. Holders' ideas range more over the future, in the belief that when trading improves in compound lard the small stocks of oil will come into play to their advantage.

HOPKINS, DWIGHT & CO.

Cottonseed-Oil Notes.

THE construction work on the building of the cottonseed-oil mill at Denison, Texas, is being pushed forward rapidly. A force of about 100 men are engaged, and the company expects to have the building, sheds, machinery and presses all in readiness to commence operations on September 1.

WORK commenced on the Velasco (Texas) Cottonseed Oil Mill on the 17th inst. The capacity of the plant will be 125 tons per day, with space and motive power sufficient to allow an increase of seventy-five tons more. R. L. Heflin, of Galveston and New Orleans, and J. S. Price, of Houston, both extensive owners of oil-mill stock in Texas and Louisiana, are among the leading members of this enterprise. Jones & Gee, of Velasco, have secured the contract for the brickwork of the mill, and A. D. Duvall has commenced to build 300 feet of wharf for shipping purposes. The mill will be built directly on the river bank, thus allowing a minimum of cost in handling receipts and shipments.

THE representative of the Western Association of Packers returned last week to St. Louis from his Southern trip. While in the South he located and started to build eight cottonseed mills at various points in Texas, Arkansas, Mississippi, Alabama and Tennessee. It is understood they are to be operated in opposition to the Cotton Oil Trust.

A NUMBER of Portsmouth business men met in Norfolk, Va., on the 17th inst. at the rooms of the Board of Trade to consider plans for establishing a cotton factory in Portsmouth on the co-operative plan. It is proposed to form a company with a capital stock of \$100,000 divided into shares of \$100 each. A number of gentlemen present subscribed \$60,000 on the spot and promised to increase their subscriptions after they had fully examined the working plan of the company. Messrs. A. E. Warner, W. G. Parker and S. P. Oust were appointed a committee at the meeting to solicit stock, and have been very active, having succeeded in raising \$90,000 of the \$100,000 required. A committee has been appointed to visit different factories along the Seaboard Air Line and inspect them in order to make a more perfect organization and adopt the best plan for successful operations. If success is met with in the formation of the company Capt. T. W. Whisnant will probably be chosen president.

MESSRS. GARDNER & JEFFRESS, of Warrenton, N. C., are now forming a stock company for the purpose of erecting a knitting mill and hope soon to have the required amount, \$20,000, subscribed and will then commence work. They will want a full equipment of machinery and are now ready to receive estimates.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 316 and 317.]

The Hartwell (Ga.) Mill.

During the latter part of last March a charter was granted to the Hartwell Cotton Mills, of Hartwell, Ga. Since then Mr. V. E. Satterfield, the principal mover in the enterprise, has been actively engaged in soliciting subscriptions to the capital stock of the company, which was placed at \$50,000. A large amount has been taken up and the company has formally organized, the following directors being elected: Messrs. J. D. Matheson, D. A. Perritt, V. E. Satterfield, J. H. McMullan, E. B. Burson, A. J. McMullan, T. P. Harris, A. N. Alford and S. W. Peck. The directors in turn elected the officers, who are: Mr. Matheson, president and treasurer; Mr. Perritt, vice-president, and Mr. Satterfield, secretary. Site for the mill has been secured, and work on the buildings will commence at an early date.

Mill at Cuthbert, Ga., to Resume.

The old Randolph Cotton Mill at Cuthbert, Ga., is to resume operations very shortly. The owners, Messrs. Gay & McWilliams, have closed a deal for the rental of the plant with Messrs. J. H. Collins and M. F. Trotter, of Charlotte, N. C., and they propose to commence operating as soon as they can add some necessary machinery. The mill now contains 3276 spindles, which number will be considerably increased, and rope machinery together with looms will be added.

About 100 hands will be given employment, and tenants now in the factory houses have been given notice to vacate in order to make room for these operatives. In about thirty days operations are expected to commence.

Progress on the Cherry Cotton Mills.

After considerable delay the work of construction on the Cherry Cotton Mills at Florence, Ala., is well under way and will be pushed forward to completion with considerable vigor. The Louisville & Nashville Railroad has completed its switch and materials are now being received at the mill-site. The machinery for the mill has all been ordered from the East, and is especially adapted for the purposes intended. The mill will make the finest yarn that has yet been manufactured in the South, say from No. 14 to No. 40. They will consume over 3000 bales of the highest grade of cotton a year, and the yarns will be used in manufacturing the finest grades of cotton fabrics. It is confidently claimed by its projectors that when completed the mills will be the most modern in detail of any in the South.

Annual Meeting of the Troup Factory.

The stockholders of the Troup Factory held their annual meeting at La Grange, Ga., on the 16th inst. The report of the president, Mr. C. V. Truitt, was read and most favorably received. A dividend of 3 per cent., payable June 15, was declared on the profits of the last six months.

This is a very good showing for this property, which is one of the safest in the State, and great credit is due Mr. Truitt for its success. Mr. Truitt resigned, owing to the pressure of other business, and upon his recommendation Mr. C. H. Griffin was elected president to succeed him. The old board of directors was re-elected, with one exception, that of Mr. J. I. Robertson, who is succeeded by Dr. T. S. Bradfield. S. H. Truitt, C. V. Truitt and Dr. Bradfield were appointed on the finance committee.

Southern Textile Notes.

IT is reported that the Enterprise (Miss.) Knitting Mills Co. will increase its capital stock to \$50,000 in the near future and put in a number of new knitting machines.

BLACKSHEAR, GA., is next on the list of towns endeavoring to secure a cotton mill. A stock company is proposed by Mr. A. P. Brantley, and he will at once endeavor to complete plans for erecting the plant.

WORK on the new mill on the Columbia canal at Columbia, S. C., is progressing finely. A large force of masons and mechanics is at work and the walls of the buildings are going up rapidly. The branch tracks from the railroad have been finished. According to present indications this plant will be in full operation before the year is out.

THE Basic City (Va.) Knitting Mills began operations several weeks ago under the personal management of Mr. George H. Selb, owner of the plant. About twenty-five hands are given employment. The sole product of the factory is ladies' hose, the output for next year being already sold. New machinery will be added shortly for the manufacture of chenille, curtains and draperies.

BY special act of the last session of the State legislature, the charter of the C. E. Graham Manufacturing Co., of Asheville, N. C., was amended, changing its name to the Asheville Cotton Mills. This is one of North Carolina's most successful plants. It is equipped with 8448 spindles and 400 looms. The product is plaids, cheviots, hickory stripes and cottonades. L. Banks Holt is president; George A. Mebane, treasurer, and E. C. Barnhardt, superintendent, of the mill.

A MEETING of those interested in the proposed cotton mill at Walterboro, S. C., was held lately to receive the report of Mr. A. Weichman, who was delegated to make a tour of inspection. His report was most favorable, and after a thorough investigation of the subject it was decided that definite action to carry out the project be made at once. A committee to solicit subscriptions and apply for a commission was appointed as follows: A. Weichman, C. L. May, D. C. Heyward, A. C. Schaffer, B. H. Padgett, C. T. Cummings and W. J. Fishburner. The capital proposed for the new company is \$100,000.

CONCERNING the proposed enlargement of the Newberry (S. C.) Cotton Mills, noted in our last issue, Mr. T. J. McCrary, treasurer and manager of the company, writes us that they intend to lay the foundation walls in the fall for an addition to the present building. The addition will give the plant a capacity of 25,000 spindles, at present only 10,880 being run. Work on the brick work of the building is expected to begin early in the spring of 1894, and it is thought it will be ready to receive 5000 spindles during November or December. The other 5000 spindles are to be put in as it is deemed advisable.

A MEETING was held on the 11th inst. at St. Matthew's, S. C., for the purpose of establishing a cotton mill in that town. The meeting was well attended by representative citizens of the town and county, and money was freely offered to support the enterprise. Fifteen incorporators were appointed to conduct the scheme and obtain a commission from the secretary of state for the opening of a subscription list. The capital stock of the company is to be \$50,000, divided into 1000 shares of the par value of \$50.00 each. The incorporators are F. J. Buyck, Philip Rich, S. H. Mack, T. A. Amaker, M. O. Dantzler, W. W. Wanamaker, George W. Fairey, Geo. E. Whaley, R. D. Zimmerman, George D. Rast, O. B. Riley, Dr. W. T. C. Bates, Isaac Redmond, Derrill Brady and J. K. Hane. The plant is to be known as the Calhoun Cotton Mill.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 317.]

The Terminal Reorganization.

By the mode of reorganizing the Richmond Terminal system, which has just been made public by Drexel, Morgan & Co., \$23,250,000 cash will be raised to relieve its financial difficulty, of which but \$6,850,000 comes from the sale of bonds. The reorganizers think that this amount will allow \$8,000,000 to be spent at once in improvements, etc., and at the same time be enough to provide for future contingencies.

These are the principal features of the organization plan.

The details of the scheme are: The reorganization of the Richmond & Danville and East Tennessee at once as a separate railway company, by means of foreclosure sales, controlling about 6000 miles of line, with fixed charges to be reduced to \$6,789,000. The roads thus combined are to maintain local independence as regards operation and traffic. The capital proposed for the new company is estimated to amount to \$20,000 bonds, \$10,000 preferred and \$25,000 common stock per each mile of the new system. The aggregate of the securities of the reorganized lines would be in round numbers \$140,000,000 in 5 per cent. consolidated mortgage bonds, \$75,000,000 non-cumulative preferred stock at 5 per cent., and \$160,000,000 in common stock.

It is estimated that out of this total \$35,383,000 bonds will be reserved by the new company under proper restrictions to be used only for new construction, betterments, purchases of rolling stock and the extensions of and additions to the system (not over \$2,500,000 to be used in any one calendar year; except that, in addition to this annual appropriation, a total of \$3,000,000 bonds may be specially appropriated, with the unanimous consent of the stock trustees, for the building of branches or extensions if undertaken within three years after the creation of the new mortgage.) All property acquired with these bonds or their proceeds is to be brought under the lien of the mortgage. Additional bonds may be issued to acquire the Cincinnati Southern Railway, now rented, or additional interests in the Georgia Central. There will also be a reserve of about \$15,000,000 out of the preferred stock. Such bonds as are earning their interest are not disturbed at all. Enough new bonds, in addition to the \$35,383,000, will be reserved to pay them all at maturity. The assessment of Terminal common stock is \$12.50 per share. East Tennessee stocks are also assessed.

As is indicated in the provision for issuing additional bonds to secure the Georgia Central, that system is not included in the scheme, but its security holders are given an opportunity to do so in this way after the pending suits are settled.

The present Terminal bond and stockholders are to be paid under the new plan in the following manner: The holders of Terminal 6s get 35 per cent. of par value in the new bonds and 90 per cent. of par in new common stock. The holders of collateral trust 5s are to receive 70 per cent. in new preferred stock and 30 per cent. in common stock. The present holders of Terminal preferred stock are to receive 35 per cent. in new preferred and 65 per cent. in new common. The present holders of Terminal common are to pay an assessment of \$12.50 per share, for which they get new preferred stock at par, the new Terminal common being charged par for par with the old common. The East Tennessee first preferred stock is assessed \$3.00 per share and its holders receive 18 per cent. of the preferred and 85 per cent. of

the common stock of the proposed issue.

A syndicate of \$15,000,000 has been formed to guarantee subscriptions by security holders for \$33,333,000 common stock of the new company at \$15.00 per share, and for \$8,000,000 of the new company's 5 per cent. bonds at 85 per cent. and accrued interest, and to take the place and to succeed to the rights of any holders of the Richmond Terminal common stock and East Tennessee stocks who shall not deposit their stock and pay assessments.

The reorganization will be conducted under the supervision of Drexel, Morgan & Co., through a committee consisting of Messrs. C. H. Coster, George Sherman and A. J. Thomas. Mr. Coster is a member of Drexel, Morgan & Co., and Mr. A. J. Thomas has close relations with that firm. Mr. Sherman is vice-president of the Central Trust Co. of New York. All the stock of the new company is to be put under a voting trust, the voting trustees to be named by Drexel, Morgan & Co.

By the arrangement made by Drexel, Morgan & Co., holders of \$43,843,000 in securities of the Richmond & Danville, and of \$30,651,192 of the East Tennessee, will be undisturbed. These securities are Richmond & Danville consolidated 6s, debenture 6s, equipment 5s; Richmond, York River & Chesapeake first mortgage 8s, second mortgage 6s, stock 6 per cent.; North Carolina stock, rental 6½ per cent.; Atlanta & Charlotte first mortgage preference 7s, first mortgage 7s, income 6s; Washington, Ohio & Western first mortgage 4s; Virginia Midland serials and incomes, general mortgage 5s; Charlottesville & Rapidan first mortgage 6s; Franklin & Pittsburgh first mortgage 6s; Western North Carolina first mortgage 6s; Charlotte, Columbia & Augusta first mortgage 7s, second mortgage 7s; Atlantic, Tennessee & Ohio first mortgage 6s; Georgia Pacific equipment 5s; Hartwell first mortgage 10s; Baltimore & Chesapeake Steamboat R. E. 6s; East Tennessee, Virginia & Georgia first mortgage 7s, first mortgage 5s, consolidated 5s; Alabama Central 6s; Knoxville & Ohio 6s; Memphis & Charleston second mortgage 7s, first and second extended 7s, consolidated mortgage 7s, No. 1 at 1400; Alabama Great Southern first mortgage 6s bonds, general mortgage 5s bonds, funding certificates 4s; Alabama Great Southern, limited, debentures, 6s.

BALTIMORE OPINIONS OF THE PLAN.

The feeling in New York and Baltimore at the first reading of the Drexel, Morgan & Co. scheme is one of dissatisfaction, although some who oppose it admit that some plan is better than no plan for all concerned. Bankers whose clients are Terminal bondholders say that too much has been allowed for Terminal stock and too little for bond values under the plan proposed, especially in the case of Georgia Pacific and Richmond & Danville bonds.

Such is the substance of opinions gathered from four of the principal bankers of Baltimore.

Baltimore investors have a large amount of bonds, so large that most of the banks of the city are represented on what is known as the underlying bondholders' committee. This body held a lengthy session immediately after the receipt of the reorganization plan, and discussed the possibility of inducing Drexel, Morgan & Co. to alter it so as to allow the bondholders more value for their holdings. If this is not done the committee may determine to resist the reorganization by legal methods, as they claim that while Drexel, Morgan & Co. may have a majority of the Terminal stock, they are in a position to control a majority of the bonds, by a foreclosure of which the Terminal stock would be rendered worthless and become a total loss to its holders. It is intimated that this argument may be used in inducing Drexel, Morgan & Co. to make better terms for the bondholders.

Hambleton & Co., of Baltimore, state that it is impossible at present to give an intelligent criticism of the plan, owing to its wide scope and the number of its different details. The main objection to it from the first reading, they say, is the attitude taken toward the bondholders.

A representative of the firm of Brown & Lowndes, of Baltimore, states that the principal dissatisfaction at present is on account of the treatment of the bondholders. It is utterly impossible to criticize it in detail until one has thoroughly reviewed and digested it in all its features.

William C. Seddon, speaking from the standpoint of Southern security investors, says that while some interested parties may be disappointed in the allowances for bonds and stocks, yet it is an opportunity which may never be again afforded to bring the Terminal out of its troubles. Without questioning the justice or injustice of its features this fact should be remembered and be counted in its favor. It is the only chance to realize on the investments. To reorganize such a series of lines is an enormous task, but there is no doubt that Drexel, Morgan & Co. are capable of doing so. If the bankers representing the underlying bondholders prevent the scheme, it would have a most serious effect on the investments they are protecting, while it might ruin the value of the common stock.

It is generally admitted that the method of reorganization is a most admirable example of railway financing, and no question is raised of Drexel, Morgan & Co.'s ability to carry it out, or of the standing of the executive committee they have selected.

Drexel, Morgan & Co. offer to reorganize the system for \$750,000, of which \$100,000 is to be paid them in cash and \$650,000 in common stock at \$15.00 per share.

More Texas Railways.

More railways are being projected and built at present in Texas than in any half dozen States in the Union. The MANUFACTURERS' RECORD has already referred to several which are being pushed forward to completion. One of these is the Gulf, Beaumont & Kansas City, which is being constructed with remarkable rapidity. John H. Kirby, its general manager, writes: "The Gulf, Beaumont & Kansas City Railway is to be pushed forward as rapidly as money can do it." Contracts have been awarded for building twenty-five miles. The total length to be built is eighty miles. The capital comes from the Texas Pine Land Association, which controls thousands of miles of timber country. It is this section that the line will open up.

The Texas Central has amended its charter so as to give it authority to construct a branch from Albany northwest to the State line; also a branch from a point near Waco to the Texas & Pacific, in Palpinto county. These extensions will give the Texas Central important Western connections and a local traffic from a section which at present has little or no railway facilities. The northwestern extension would be about 275 miles in length and tap the Santa Fe system. The other branch would be about sixty miles long.

A dispatch from Abilene, Texas, states that capitalists from St. Louis, Kansas City and Chicago are back of a scheme to build a road from Bowie to Spofford Junction, on the Southern Pacific, a distance of 332 miles. It would pass through Graham, Albany, Abilene and San Angelo, and shorten the distance from St. Louis and Kansas City to the City of Mexico over 600 miles.

Still another project is to build a short line from San Antonio direct to Galveston, which will connect with the Gulf, Colorado & Santa Fe near Rosenberg, Texas. This line would be 200 miles in length.

A part of the Pecos Valley Railway has

already been surveyed, while the Rock Island track-layers are within a few miles of Fort Worth.

The M. K. & T. Projects.

At the annual meeting of the Missouri, Kansas & Texas, held at Parsons, Kan., the company decided to retain its headquarters in Parsons, as the attorney-general of the State threatened to have its charter revoked if the offices were removed to St. Louis. The amount of stock represented at the meeting was \$50,439,950, of which the Rockefellers hold a large amount. Henry C. Rouse was elected chairman of the board and president of the company, and the following general officers were elected: Thomas C. Purdy, vice-president and general manager, headquarters at Parsons; William Dowd, vice-president; Charles G. Hedge, comptroller, secretary and treasurer; Simon Stern, general counsel, and Robert W. Maguire, local treasurer. The annual meeting of the Texas lines of the Missouri, Kansas & Texas was held at Denison, and the general officers above noted were re-elected.

In connection with these meetings several reports of extensions have been circulated. One is that real estate purchases aggregating in value \$1,000,000 have been made in West Kansas City. The road has long coveted an entrance into Kansas City, but has been unable to obtain terminal facilities, and the recent purchases near the stock-yards will solve the problem. It is also reported that the Missouri, Kansas & Texas will be extended to the eastern boundary of Texas and an arrangement made with the Erlanger system of lines and a tidewater outlet secured at some port of Louisiana.

Official Railway Changes.

Recent official changes on Southern railway lines are these:

W. S. Keenan appointed general passenger agent of the Gulf, Colorado & Santa Fe.

P. T. Downs appointed superintendent of the Gulf, Colorado & Santa Fe, with A. J. Davidson division superintendent.

S. M. Shattuck has been appointed Colorado passenger agent for the Baltimore & Ohio, the Ohio & Mississippi and the Baltimore & Ohio Southwestern lines.

G. A. Hancock, superintendent of motive power of the San Antonio & Aransas Pass, has resigned to accept a similar position on the Gulf, Colorado & Santa Fe system. L. A. Waugh takes the position vacated by Mr. Hancock.

C. D. Dorman and J. W. Terry have been chosen directors of the San Antonio & Aransas Pass in place of Henry Elmen-dorf and E. P. Swenson.

The civil engineer's office for the Texas division of the Missouri, Kansas & Texas system will be abolished June 1.

John R. Nolan has resigned as general manager of the Wilmington Seacoast line, and John H. Daniel has been appointed in his stead, with office at Wilmington, N. C.

Horace Smith has been appointed general freight agent of the Queen & Crescent route.

At the annual meeting of the Ravenswood, Spencer & Glenville, a line thirty-three miles in length extending from Ravenswood, W. Va., to Spencer, W. Va., William Woodyard was elected president, and D. W. Chapman, secretary.

An Advance in Pig-Iron Rates.

The Pennsylvania, Baltimore & Ohio and Reading have by mutual agreement decided to advance the freight rates on pig iron from Hagerstown, Shenandoah Junction, Alexandria and Staunton—in other words, from points south of the Potomac river—about thirty-five cents per ton, to take effect June 1. This increase in rates will have much effect on the Southern iron industry, and may force the manufacturers to raise the prices. It is learned on good

authority that the Chesapeake & Ohio, Norfolk & Western and other large systems are strongly opposed to the advance, and may protest against it.

The general freight department of the Baltimore & Ohio gives the MANUFACTURERS' RECORD the following reason for the increase: The rates in Pennsylvania and other Northern States on pig iron have gradually been raised for some time past until now the material is considered sixth class freight. The Southern rates, it is claimed, are too low in proportion to the others, hence the action of the companies.

William H. Fitzgerald, general agent of the Seaboard Air Line and Richmond & Danville roads at Baltimore, states that the companies he represents have given the interstate commerce commission ten days' notice of a withdrawal in rates until a new schedule is agreed upon.

New Steamship Line to Mexico.

The project of the Louisville & Nashville Railroad to establish a line of steamships from Pensacola, Fla., to Tampico, Mexico, has assumed definite shape, and the road has now issued through rates to the City of Mexico and all points in the republic. Freight will be taken to Pensacola, thence by steamer to Tampico, and from there by rail to its destination. The steamer Oakdene has been chartered for the line and makes its first trip next week. This enterprise of the Louisville & Nashville road will not only prove a benefit to the road itself, but will be of the utmost value to all industries along its line, bringing them, as it will, in direct communication with Mexico, where the opportunities for enlarging trade, if it is properly handled, are most extensive. Further than this, it will give an outlet for both coal and such farm products as are in demand in Mexico, and at the same time will tend to induce the location of industries to handle and work such raw materials as will be imported. The officers of the road certainly deserve the highest commendation for the progressive spirit they have shown in this and other matters relating to the development of the South.

The Pennsylvania Railroad's Exhibit.

The principal exhibit of the Pennsylvania Railroad at the Columbian Exposition is in the company's own building. It presents an interesting showing of that corporation's history from 1815, when the first charter was granted to a railroad company in America to construct a road from Trenton to New Brunswick, N. J., to the present time, when it controls nearly 10,000 miles of road, penetrating thirteen States, and with termini in New York harbor, at the national capital, in three great cities of the Ohio valley and at five of the great lake ports.

One of the features of the exhibit is a reproduction of a model Pennsylvania Railroad station of the present day, with signal tower, tracks, ballast, switches, frogs, overhead foot-bridge, fences and gates. Probably the most conspicuous object in the display is the original John Bull train, which here rests after its 100-mile journey across the continent from New York. Besides this complete display the company has placed in the general transportation building examples of its finished products of 1892 in the shape of cars turned out at its Altoona shops.

Law Against Ticket Scalping.

The Texas legislature before its adjournment passed a law which prohibits ticket scalping in the State after August 10 next. The railway people are said to have urged its passage, and all seem to favor it. The ticket-sellers, however, propose to test the law in the courts.

Some of the railroad attorneys in the State say a ticket-scalping law was repealed

in the State of Illinois, but that it was very different from the Texas law in more ways than one and had an imprisonment clause in it. It is further suggested by the advocates of the Texas law that the State, under its operation, does not confiscate the property of the scalper for the simple reason that he gets no license from the State under which to conduct his business. It is understood that the scalpers of the State will organize in the movement to test the constitutionality of the bill when it goes into effect. It is similar to the Pennsylvania statute on this subject, having been practically copied from it, and the latter has stood the legal storms and tempests for several years now and is still in vogue.

Going on to Nashville.

The report in last week's issue of the MANUFACTURERS' RECORD that the Chesapeake & Ohio system might build a line to Nashville, Tenn., seems to be confirmed by a dispatch from Elizabethtown, Ky., which states that work is to begin on the Hodgenville & Elizabethtown Railway within sixty days. The Newport News & Mississippi Valley is supposed to be back of this line, which at present is contemplated to be built as far as Gallatin, Tenn., only twenty-five miles from Nashville. It is understood that a preliminary survey of this distance has already been made. From Nashville the Chesapeake & Ohio would enter Louisville by way of the Newport News & Mississippi Valley. President Hubbard, of the Hodgenville & Elizabethtown, is authority for the statement that the Huntington or Chesapeake & Ohio system will control the entire route, and that the next move proposed after reaching Nashville is an independent line to Chattanooga, Tenn.

A Proposed Connection.

The idea of making a connection between the Western Maryland and Baltimore & Ohio lines has been revived by the report of the Western Maryland investigating committee, which defers the sale of the road at least two years. The plan, as outlined by President Hood, is to build a spur from a point on the Western Maryland just outside of Baltimore to the Baltimore & Ohio at Mount Winans. The distance is four miles, and the estimated cost of construction is \$200,000. Such connection would give the Western Maryland tidewater terminals at Locust Point; also the advantages of the Belt Railroad tunnel and passenger stations, now under construction, while much of the trackage which it now pays for the use of the Union tunnel, amounting to over \$75,000 yearly, would be saved. No definite proposition has been submitted to the Baltimore & Ohio looking towards such an arrangement, but an official of the latter company states that it is not regarded unfavorably.

A Tennessee Railway Sold.

The Knoxville, Cumberland Gap & Louisville has been bought by a syndicate which, it is reported, is acting for the Louisville & Nashville. The Knoxville, Cumberland Gap & Louisville extends from Knoxville, Tenn., to Middlesborough, Ky., a distance of seventy-five miles, with a branch seven miles long. It was completed in December, 1890. It would be a valuable addition to the Louisville & Nashville system, giving the latter an entrance into Knoxville. For a long time the East Tennessee, Virginia & Georgia has practically had a monopoly of the Knoxville business. The only way by which the Louisville & Nashville could reach that section of Tennessee was by acquiring the Cumberland Gap road, and this people along the line have strongly opposed, Middlesborough citizens especially believing that their city would lose its importance if the Louisville & Nashville was extended beyond it.

An Interstate Project.

The governor of Nebraska has sent out invitations to the governors of Texas, Louisiana, Oklahoma, Kansas, South and North Dakota, Minnesota, Iowa, Missouri and Arkansas to send representatives to an interstate railway convention to be held in Lincoln, Neb., June 28. The Nebraska legislature at its last session passed a resolution favoring such a convention. The project to be considered is a line of road to extend from the northern boundary of the United States, through several of the States mentioned, to Galveston, Texas. The Northern terminus of the road might be extended to some point on the Canadian Pacific. It is argued that the Gulf of Mexico is several hundred miles nearer Omaha, Neb., for example, than New York, where the great bulk of Western products are shipped by the present through lines.

Railway Earnings.

The following figures show reports of several Southern railways recently issued: Western Maryland for April: Gross earnings were \$95,675.03; for April, 1892, \$82,274.66, an increase of \$13,400.37. The operating expenses during the same period were \$63,794.24, as compared with \$53,422.24 for April, 1892, an increase of \$10,372. The net earnings in April, 1893, were \$31,880.79; in April, 1892, \$28,852.42; increase \$3,026.37.

Waco & Northwestern for April: Receipts from all sources, including cash on hand March 31, \$112,940.60; disbursements for the same period, \$36,877.58; cash balance, \$76,063.02.

Illinois Central for nine months ending March 31: Gross earnings of \$14,860,250, an increase of \$43,006, and net of \$4,075,155, a decrease of \$238,573.

The Baltimore & Lehigh.

Bondholders of the Baltimore & Lehigh road are endeavoring to adjust the troubles of the road. Committees representing the first and other mortgage bondholders have been appointed, consisting of W. W. Spence, Alexander Brown, George Jenkins, John K. Cowen, M. H. Houseman and Solomon Frank. Both interests are represented in these committees. They have met and decided to recommend the appointment of ex-Judge Fisher as a receiver, with a view to stopping present litigation. It was also resolved to urge that the present work and contemplated improvements be continued, and that contracts with other roads which have been made shall be carried out. These recommendations will be submitted at a future meeting of the bondholders.

Railroad Notes.

THE Florida senate has passed a bill limiting the working hours of train crews to thirteen hours per day.

THE Augusta Transfer & Tramway Co. has purchased the Augusta & White River Railroad noted in last week's issue.

C. P. HUNTINGTON, of Chesapeake & Ohio and Newport News fame, has been elected president of the Pacific Mail Steamship Co.

TWENTY double-decked cars, loaded with 6000 sheep, formed one shipment recently to Chicago. They were brought on the Southern Pacific from west Texas.

JOHN W. TEW, of Rome, Ga., has invented a switch lock which, it is claimed, can be operated by the weight of a car and cannot be opened or shut by hand.

PRESIDENT F. J. MEHALL, of the Chattanooga Western Railroad, advises the MANUFACTURERS' RECORD that no contract has as yet been let for its construction.

THE Savannah, Americus & Montgomery has raised the rates ten cents a barrel on spirits and five cents a barrel on turpentine on all shipments from Abbeville, Ga., to

Savannah. People in that section threaten to boycott the road and ship everything by boat unless the rates are restored.

THE Florida courts have decided that a railway company cannot be legally compelled to locate a depot on a particular site, and any such contract is void.

THE Mississippi railway commission has fixed the sleeping-car rate in that State at \$1.00 for 100 miles or less, and \$1.50 for any distance within the State line over 100 miles.

TEN of the first cars manufactured by the American Car Co., at Basic City, Va., left the shops last week. These are part of an order for 300 cars for the Chesapeake & Ohio.

THE Seaboard Air Line has awarded to the Pencoyd Iron Co., of Pennsylvania, a contract for building a steel bridge 600 feet in length over the Haw river, in Chatham county, N. C.

THE Federal Court at Paris, Texas, has granted an order restraining the State from proceeding with suits for the recovery of 103,000 acres of land from the Houston & Texas Central.

THE holders of general mortgage bonds of the Mobile & Ohio have instructed their representatives at the meeting to be held May 29 to vote in favor of extending the line to Montgomery, Ala.

IT is reported that the South Carolina and Richmond & Danville roads will in a few days file their suits against the South Carolina sheriffs for tying up their trains during the recent tax fight.

THE International & Great Northern is being called the "Tommie" road because so many of its officers are named "Tom." Some other Texas roads are termed the "Sap," "Katy" and "Gag" lines.

THE International & Great Northern has been hauling so much cottonseed-oil cake and meal to Velasco, Texas, that a hold-up has been ordered. Every train going to this new seaport has been carrying cars loaded with this kind of freight.

THE suit brought by certain stockholders of the Alabama Terminal Co. to restrain other stockholders from building the proposed Montgomery, Tuscaloosa & Memphis road has been decided against the plaintiffs by the Alabama Supreme Court.

JUDGE NEWMAN has passed a final decree in the United States Court for the sale of the Marietta & North Georgia Railroad within sixty days to the highest bidder. The minimum price fixed by the order is \$925,000 for the Georgia end of the line and \$800,000 for the Tennessee portion, \$1,725,000 for the whole.

THE State of Georgia intends collecting all the back taxes due from the railway corporations, and through the attorney-general will bring suits against all the companies who have thus far failed to pay. The Georgia Railroad and Millen & Augusta Railroad companies claim that their charters exempt them from payment of county taxes.

THE East Tennessee, Virginia & Georgia has been turning out cars from its shops at Knoxville as fast as night and day forces of men could get them ready. Several of these cars are improved observation cars, similar to those commonly used by officials of the road, which will be run between Atlanta and Knoxville and Warm Springs, N. C., this summer. On the roadbed much work has been done also.

As already predicted by the MANUFACTURERS' RECORD, the Big Four system will enter Louisville, Ky. The company has secured the uncompleted Louisville & Jeffersonville bridge, and will complete it at once. In order to secure proper terminal facilities the company proposes to build an elevated railroad in Congress alley five miles in length, connecting with every railroad and bridge in the city.

Manufacturers' Record.

PUBLISHED EVERY FRIDAY BY THE
Manufacturers' Record Publishing Co.
MANUFACTURERS' RECORD BUILDING,
Lexington and North Streets,
BALTIMORE.

EDWARD H. SANBORN, Editor.
H. S. FLEMING, Associate Editor.

CLARENCE P. DAY, Business Manager.

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Chicago, Ill.
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BALTIMORE, MAY 26, 1893.

THE immigration agent of the Norfolk & Western Railroad has purchased a small farm at Cozney Springs, near Roanoke, Va., and proposes establishing on it some German or Swiss truck farmers who are expected to arrive before long. If the effort is successful other farms will be purchased at desirable localities along the line of the railroad.

At the recent convention of East Tennessee farmers it was decided to urge a law requiring stock-owners to keep their animals on their own property. At the same time the sense of the meeting was to urge a "no-fence law" to save farmers the necessity of building fences. It is difficult to see how the two are going to agree. Similar laws are in force elsewhere, and have led to many bitter legal fights between neighbors.

THE Department of Agriculture recently received advices that a large importer of food products in Copenhagen has recently purchased a heavy consignment of California canned and preserved fruits as a result of the banquet recently given in that city, at which only California products—fruits, raisins, figs, etc.—were offered. This is an idea which might be acted on by our Southern States. It would not cost much and would undoubtedly yield beneficial results.

THE crop of peaches in Georgia promises to be unusually fine this year, both as to quality and quantity. They are now well advanced, and by June it is expected that the first carload shipments will be made. From the Marshallville and Fort Valley districts alone there will be sent nearly 250 carloads, and probably fifty cars from around Griffin. Each carload sells for about \$100, of which nearly \$60 is the cost of growing, packing, freight and selling expenses, leaving on an average \$50 profit per car.

THE following paragraph from a well-known English financial paper will interest the believers in electricity superseding steam as a motive power:

The Pennsylvania Central Railway will put on a special daily train to the World's Fair, reducing the time from New York to Chicago to nineteen hours. Electric motors will be used. These have been put to a practical test in the mountain ranges through which the Canadian Pacific Rail-way passes, and it is thought that their utility can be further demonstrated in overcoming the

heavy gradients between Altoona and Summit, in the Alleghenies, over which the trains of the Pennsylvania line must pass on their way to Pittsburgh.

Our English friends appear to have the advantage over us in obtaining advance information.

EVERY engineer and metallurgist in the country will applaud with pride and satisfaction the announcement that John Fritz, of Bethlehem, Pa., is to be awarded the Bessemer medal by the British Iron and Steel Institute. The work which Mr. Fritz has accomplished is not so widely known as that of some other engineers because of his modesty and willingness to give credit to others for matters which his efforts have been most largely instrumental in accomplishing. It is the general opinion of all who know him and are familiar with his work that there is no American more worthy of this honor than John Fritz, and we congratulate our English cousins upon the good judgment they have shown in selecting him to be the recipient of high honors.

Why Immigrants Shun the South.

The editor of the *American Artisan* picked up a phrase-book for newly-arrived Swedish immigrants some days ago and ran across the following Scandinavian-American dialogue:

Q. "After I land in New York shall I there stay?"

A. "No. You should take a train and go West to Minnesota or Dakota, where you can get a big farm with little money."

Q. "Why shall I not go to Texas?"

A. "Texas is not a good place for the Swedes to go. The people are not good like in Minnesota, but bad and fierce. The people live in second stories and pull up their ladders at night, or else the cowboys would rob them. No Swede must go to Texas."

This is no joke, but a verbatim quotation, bad grammar and all, from a guide-book, with Swedish and English in parallel columns, and distributed broadcast over Sweden by the agents of a steamship company. Concerning its utter falsehood there can be no doubt at all. We give it merely as a straw to show that the trend of immigration is toward the Northwest.

We invite the attention of the Southern governors and all others who are interested in the Southern immigration movement to the above extract from a printed editorial in the *American Artisan* of May 20. This will give a hint as to the obstacles that must be confronted in stimulating Southern immigration, and it will serve to show how unfairly, how unjustly, yes, how dishonestly, the South is being treated by those who handle Western and Northwestern immigration. By systematic misrepresentation a widespread impression has been created to the effect that the South is no place for an honest, inoffensive and industrious immigrant. It is to counteract this slander and to spread the truth about the South that calls for vigorous work of a most practical character on the part of all who are interested in peopling the vast unoccupied areas of the South with desirable foreigners.

This text, furnished by the *Artisan*, gives another illustration of what we have endeavored to impress upon the minds of the people of the South, namely, that effective work in the immigration movement can be put forth only across the ocean, among the people who are the most desirable immigrants. Impressions created in the minds of immigrants before they leave their homes are of the utmost importance, and a falsehood lodged there cannot easily be removed by any amount of argument when the immigrant has reached our

shores. Upon such lines the mighty movement into the Northwest was started and still is maintained, and if the South desires to reap the benefits of such an influx of settlers it must be accomplished by methods that have already demonstrated their success, namely, missionary work abroad.

The Southern Financial Situation.

The heavy blow which English interests have suffered from the failure of fourteen banks in Australia with deposits aggregating \$424,722,255, of which, according to the bank officer's sworn statement to the British government, \$131,346,855, or nearly one-third, was English money, accounts in large measure for efforts which have been made on the other side to realize on American securities and draw in on business ventures. Only four Australian banks of importance, with deposits amounting to about \$303,000,000, are solvent at the present time, the holdings of the seven smaller banks amounting to but \$40,000,000. It is difficult to say how wide-reaching will be the effect of these failures. Thus far, however, the extensive English interests in the South have been practically undisturbed, though financial matters everywhere have to a more or less degree been affected.

A bright feature in the situation is the showing of the Southern railway group for net earnings in March. Taking thirty-two of the principal lines, the earnings for March, 1892, were \$1,686,122; for 1893, \$1,940,121, an increase of \$253,999, or about 15 per cent. This was the largest increase, except in the Middle States, where the per cent. was 16.17. This increase was not due to any unusual business, but simply the result of the traffic for the month. It is quite a difference compared with the New England roads, where the decrease was nearly 9 per cent.

The failures of the First National Bank and the Oglethorpe National Bank at Brunswick, Ga., followed by that of Mayer & Ullman, caused much uneasiness in Georgia until it was found that the depositors in the bank were fully protected. The Oglethorpe Bank had a paid-in capital of \$150,000 and the First National Bank of \$200,000. W. E. Burbage was president of the latter, and M. Ullman, who committed suicide the day of the failure, president of the former. Ullman's interest in the firm of Mayer & Ullman caused the last failure, which was for \$280,000.

The Bank of the Carolinas, which recently ceased payment in its several institutions, has been declared to have assets more than equal to its liabilities, and it will resume business at once. The suspension was simply due to inability to realize at once on good paper.

Reports from a number of Southern trade centres show that the money stringency is generally prevalent, but that there is no feeling of distrust or insecurity apparent.

Mismanagement, Not Faulty Conditions.

The recent failure of the pearl-button factory at Dayton, Tenn., emphasizes a fact which we have striven to impress upon the minds of our readers—that is, the need of good management in all industries, whether they be small or

large. In this case the factory was doing a thriving business, purchasing its shells from Japan, Australia, South America and other points, and selling its finished buttons to some of the largest dry goods and notion houses in both the North and South. There was a good profit in the business; the demand was greater than the factory could fill, and the sales were all made on short time to perfectly solvent houses. Labor was cheap and easily secured, and no heavy debts were incurred in building or equipping the plant. Under these conditions it would have seemed that the factory could not help but succeed.

Unfortunately, however, the manager was also cashier of a small bank in the town, and by various practices which have not yet been fully fathomed by the accountants, so tangled up the affairs of the two, and with them some other things in which he was interested, that when the bank failed, as it did recently, it drew down with it the button factory, and in order to secure an equitable settlement of its affairs it has been necessary to appoint a temporary receiver. In the meantime the manager has "gone East on business," and his whereabouts remains unknown.

This was the only button factory in the South, and comments already heard are to the effect that the failure was because the South could not support such an industry. This is not the case. As in the case of other failures which have been brought about by mismanagement, or may be dishonesty, Southern conditions are blamed, and instead of looking for the true reason a sweeping assertion is made which tends to prejudice against that section those who are unfamiliar with the facts.

The manner in which any enterprise is managed can be accurately gauged by the degree of its success. With bad management comes failure to a concern which, under proper handling, might have been made a paying investment. We have in mind a manufacturing plant in Virginia which for years swallowed up all the capital that could be raised for its development. After passing through the hands of various companies it was finally taken hold of by an able manager whose successful efforts have resulted in building it up until now it may be classed among the most successful concerns in that State.

Good management is the secret of success in the North, South or anywhere else. Southern conditions are not at fault where failure has resulted from inattention to business, and this, as a rule, in one form or another, has been the cause of the failure of such manufacturing enterprises as have not succeeded there. In no part of this country is there a better field for industrial development than in the South. Its unexcelled resources, yet but partially developed, give to the manufacturer every facility for obtaining material. Labor is readily secured, and for moderate wages. Its railroads afford every facility for securing raw material or carrying the finished products to market. All of the conditions are there, needing only the effort of man to utilize them.

It is safe to assert that any industry which may be established in the South will, if located with due regard to its needs, prove a success if managed properly. Without good management it would fail anywhere.

CORRESPONDENCE

First Discovery of Bauxite in Alabama.

IRONDALE, ALA., May 14.

Editor Manufacturers' Record:

An article in the MANUFACTURERS' RECORD of May 12, written from Cedartown, Ga., accredits to Edward Nichols, of Ridge Valley, Ga., the discovery of bauxite in Floyd county, Ga., in 1886, claiming this to be the first discovery of bauxite in the South. The writer lays a prior claim to it, having found it at Jacksonville, Ala., on the Walker lands in the winter of 1879, when he called the attention of Edward Nichols, of Ridge Valley; Gen. Willard Warner, president of Tecumseh Iron Co., and Gen. J. W. Burk, of Jacksonville, to the deposit. Mr. Nichols carried away samples of the material and made analyses of it. From this it will be seen that the first discovery of bauxite in Alabama was at Jacksonville in 1879.

T. S. McDANIEL.

Pyrites in Georgia.

ATLANTA, GA., May 15.

Editor Manufacturers' Record:

I have just read in your very valuable publication of May 12 of the enormous imports of foreign pyrites for the manufacture of chemical fertilizers in this country, and would state that there is enough pyrites in the mountains of north Georgia to run every chemical furnace in the South, and nothing is wanting to establish the fact but capital and experienced miners to properly work them.

There are very large deposits or mines of pyrites in Paulding and Harralson counties, also in Carroll county near Villa river, on the Georgia Pacific Railroad, the ores at this place showing by analysis 45 to 50 per cent. sulphur. There is also a fine vein in Fulton county ten miles south of Atlanta from which considerable ore has been shipped with very satisfactory results. I am reliably informed that over \$1,000,000 go out of this country annually to foreign ports for pyrites and sulphur. Now, why not keep this at home? The cost of fertilizers to the farmer might be greatly reduced by using the domestic ores.

In 1854 and 1855, when Ducktown, Tenn., was in the zenith of its prosperity, hundreds of shafts were sunk in this section in search of copper. It was then that immense quantities of pyrites were thrown out, which at that time were worthless, but were largely used during the war for making copperas by the leaching process.

The tests or developments at that time were very superficial, and I don't suppose there is a shaft in this section over 100 feet in depth. I think pyrites the coming mineral of Georgia. The cost of the Spanish pyrites is \$9.35 per ton delivered at Savannah.

I. Y. SAWTELL.

Business Matters in Norfolk.

NORFOLK, VA., May 19.

Editor Manufacturers' Record:

A few days ago our people were very pleasantly surprised to find that the Chesapeake & Ohio Railroad had secured such a good footing in our grand harbor here by the purchase of more than \$560,000 worth of the most desirably located water frontage. Some may say that such a deal is a straw indicating the direction of the current, but we suggest that it is a whole saw log, and not only indicates, but shuns right out the future policy of the Chesapeake & Ohio people and the future development of Norfolk.

This week has seen the consummation of another deal in real estate of quite respectable proportions. The fine and well-located wharf property of the Frey Bros. (lumbermen) has been purchased by a company composed of J. J. Whispell, C. Preston Denby and others of this city. The capacity of the mills will be increased

and a charter secured. The style of the company will be the Interstate Timber Land & Lumber Co., doing business in Virginia and North Carolina, with principal office in Norfolk, Va. The property here was transferred for \$30,000, besides which was transferred valuable tracts of timber in North Carolina.

The wharf property, mills, etc., are located nearest the centre of business of any property in this harbor. The parties in charge are experienced millmen, and we think most excellent judgment has been shown in the selection of the location. The company owns about 50,000,000 feet of excellent pine timber.

Stock is now being taken for a cotton mill in Portsmouth, and there is every prospect of success. One by one we see new enterprises locating in our midst. We are now pretty well along with the harvesting of our berry crop, which has been a profitable one. Prices have been the best for many years. The pea crop is also moving North at fine prices. There is a 500,000-barrel potato crop in sight now, about half grown, prices of which will doubtless rule from \$1.50 to \$4.00 per barrel. These three crops represent something more than \$2,000,000 in gross sales, all of which, except freight and commissions, comes back to us and is kept at home, the largest single item of which is labor bills.

The above-named crops, together with a list of twenty-five or thirty more, are grown within twenty miles of this city, aggregating in value fully \$4,500,000 worth annually. In this work is employed 10,000 hands regularly, and at this season of the year this number is increased to 20,000 or more. When we get a few more cotton mills here and a few more lumber plants, and our truck business gets its full growth, we shall indeed be the busiest city on the continent. As it is at the present time we may safely assert that within the corporate limits of the three cities on this harbor, and within the 20-mile limit of our great truck fields, we have fully 40,000 laborers employed. Of these 40,000 laborers a great majority are what we may term common laborers, working on the farm, in the fishing and oyster trade, in the saw mills and in the cotton factories. We are now at work to secure the location of manufacturing establishments requiring the services of a large number of skilled workmen. Taken all in all, the future of Norfolk never looked brighter.

A. JEFFERS.

Affairs at Alexandria.

ALEXANDRIA, IND., May 20.

Editor Manufacturers' Record:

Alexandria is not bothering itself much about the money situation that the newspapers are having so much to say about. The factories are all humming as usual, the merchants are going along prosperously, the new factories are going up as fast as carpenters and bricklayers can build them, there is more building in progress than there has ever been before, everybody is busy and nobody seems to have time to discuss the silver question, the gold reserve and like matters that seem to be absorbing public attention just now.

The result of the recent auction sale of lots was gratifying to the Alexandria Company. The purchasers were from widely-scattered parts of the country, and they will spread abroad the fame of Alexandria. Many of the purchasers, before they left town, were offered good profits on the lots they had bought.

There is a great demand here for both stores and residences. Work was begun yesterday on two brick stores, and they have already been rented. Work is proceeding rapidly on the block of five stores, with rooms for offices and other purposes above, which Messrs. Ansted Bros. are building. The large number of fine brick and stone store buildings that have been

erected on Harrison, Washington and Church streets within the last six months gives this part of the town a really metropolitan appearance.

Contracts have been let for the two fine school buildings described in a recent letter. The machinery for the electric-light company is being put into place, and the plant will go into operation in a short time.

Iron and Steel Industries of the West.

Dr. William M. Sweet, of Philadelphia, has prepared for the eleventh census a report on the iron and steel industries of the Western States covering the year 1890, with comparative figures for previous census periods. From advance sheets we have prepared the following abstract: The rapid development of natural resources, the increase in railroad mileage and the establishment of diversified industries to meet the demands of a growing population have contributed to the great expansion in the iron and steel industries of this section of the country. The statistics covering the operations of blast furnaces, iron and steel rolling mills, Bessemer, open-hearth and crucible steel works, iron-ore forges, and pig-iron and scrap-iron bloomeries are given in the following table for the census years 1890 and 1880. In compiling the figures the geographical division of the Western States is considered as comprising the iron-making States of California, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Oregon, Utah, Washington, Wisconsin and Wyoming:

General Heads.	1890.	1880.
No. of establishments....	225	231
Capital invested.....	\$108,070,751	\$52,318,593
Ave. No. hands employed	41,377	37,541
Amount of wages paid....	\$23,020,028	\$14,853,781
Cost of materials used....	\$91,707,954	\$54,580,364
Value of products.....	\$129,551,521	\$78,568,424
Tons of products.....	5,073,339	1,944,179

*Excludes officers or firm members, clerks or salesmen and their salaries.

A greater increase than the table indicates from 1880 to 1890 would be shown in the data for capital invested, hands employed and wages paid if the figures for the two periods were compiled upon the same basis. The statistics for 1880 included the capital invested and labor employed in iron-ore and coal mining, limestone quarrying and other similar branches of industry directly connected with the manufacture of pig iron, while these data are excluded from the tabulations for 1890. On the other hand, the statistics of "live assets," such as cash, bills and accounts receivable and similar items of capital investment are believed to be more fully reported for 1890 than at previous census inquiries. It will readily be concluded from the preceding statements that accurate comparisons of statistics relating to capital employed are impracticable.

In 1880 the furnaces of the Western States contributed a little over 26 per cent. of the total quantity of pig iron produced in the country that year, and in 1890 this section made over 27 per cent. of the total output, the small quantity of castings made direct from furnaces being included in each year.

In the following table is presented a comparative statement of the blast-furnace industry of the Western States in the census years 1890 and 1880:

General heads.	1890.	1880.
No. of establishments....	104	136
Capital invested.....	\$36,681,060	\$27,618,395
Ave. No. hands employed	7,623	14,382
Amount of wages paid....	\$3,715,699	\$4,183,483
Cost of materials used....	\$30,935,275	\$17,158,049
Value of products.....	\$39,611,313	\$24,684,885
Tons of products.....	2,686,803	995,533

*Excludes officers or firm members, clerks or salesmen and their salaries.

The quantities and costs of the materials consumed by the blast furnaces of the

Western States during the census year 1890 are given in the following table, the ton of 2000 pounds being used, except for charcoal, which is given in bushels:

Materials.	1890.	
	Quantity.	Cost.
Domestic iron ore (tons).	4,123,773	\$17,637,721
Foreign iron ore (tons)...	11,508	62,552
Limestone (tons).....	1,048,873	899,154
Anthracite coal (tons)....	45	141
Bituminous coal (tons)....	351,199	486,791
Coke (tons).....	4,320,040	8,288,103
Charcoal (bushels).....	35,841,190	2,438,186
Mill cinder, etc., (tons)....	336,561	954,521
All other materials.....		238,166
Total.....		\$30,935,275

The development of the extensive deposits of high-grade ores in the Lake Superior district, in response to the demands of a rapidly-growing steel industry, and the economies which the more extended use of coke has rendered possible in the manufacture of pig iron, have led to an important change in the character of the raw materials consumed by the blast furnaces in several of the Western States. In many districts the use of local ores containing a low percentage of iron has been abandoned for the richer Lake Superior iron ores, and in addition there has taken place a more general substitution of coke for the bituminous coal which was largely employed in 1880, either alone or as an important constituent of a mixed fuel of raw coal and coke.

The comparative condition of the iron and steel rolling mills, Bessemer, Clapp-Griffiths, Robert-Bessemer, open-hearth and crucible steel works during the census years 1890 and 1880 is shown in the following table:

General Heads.	1890.	1880.
No. of establishments....	121	91
Capital invested	\$71,289,691	\$24,441,598
Ave. No. hands employed	33,754	22,994
Amount of wages paid....	\$19,304,329	\$10,610,398
Cost of materials used....	\$60,774,679	\$37,270,215
Value of products.....	\$89,910,268	\$53,623,539
Tons of products.....	2,392,536	941,644

*Excludes officers or firm members, clerks or salesmen and their salaries.

The apparent increase in the aggregate capital invested in rolling mills and steel works from 1880 to 1890 was 192.08 per cent. During the same period the tonnage of products increased 154.08 per cent., although the percentage of increase in the total value of finished products, owing to the decline in the selling prices of iron and steel, was only 67.73 per cent.

Very few changes have taken place in the relative rank of the different States since 1880. Ohio continues to occupy the leading position, with Illinois second. Next to these two States, California has shown the greatest development in the past decade. The prominence of Illinois as an iron and steel-producing State is due to the establishment of an extensive Bessemer-steel industry. In 1890 over 81.61 per cent. of the total tonnage of iron and steel produced in this State was sold in the form of Bessemer steel, principally rails. Ohio is a large producer of sheets, plates, nails and other of the more highly finished forms of iron and steel, so that the total cost of the labor in that State bears a greater ratio to the total value of the products than is the case with most of the other States. In 1880 this State was a large producer of Bessemer-steel rails, but has since practically abandoned this branch of manufacture. Missouri has shown no growth during the past decade, but the decline in the value of its products is caused by the much lower prices prevailing in 1890 than in 1880, and not by a smaller tonnage.

THE Bristol (Tenn.) Furnace Co. held a meeting last week to consider plans for putting its plant in operation in the near future. Employment will be furnished 150 hands.

COAL AND COKE.

Coal-Washing Plant at Ferona, Nova Scotia.

We are enabled, through the courtesy of Dr. Walter M. Stein, of Philadelphia, to present the following description and illustrations of the coal-washing plant which

connection with the coal-washing plant there is a retort coke oven plant of fifty-four retort ovens, having a daily capacity of about 175 tons of coke. The coke is pushed out with a special machine, a coke pusher. The attached drawing shows the general arrangement of the washing plant, Fig. 3.

The coal from the various mines arrives on the railroad tracks a_1 and a_2 , and is

the perforations drops into the crusher rolls c_1 and c_2 , and is again taken, after the crushing, to the shaking screen d by means of the bucket elevator f .

The coal passing through the shaking screen d is taken by means of the bucket elevator g to the separating screen drum h , which separates it into three sizes—nothing to one-eighth inch, one-eighth to one-quarter

The washed coal flows in gutters to the large elevator boot k_2 , and is elevated from there to the top of the storage tower by means of the perforated bucket elevator l_2 , which discharges on the distributing conveyor m , which carries it into the various compartments n of the large storage tower.

The two jigs shown in dotted lines, the elevator boot k_1 , and the elevator l_1 , are

Fig. 1 Section A.B

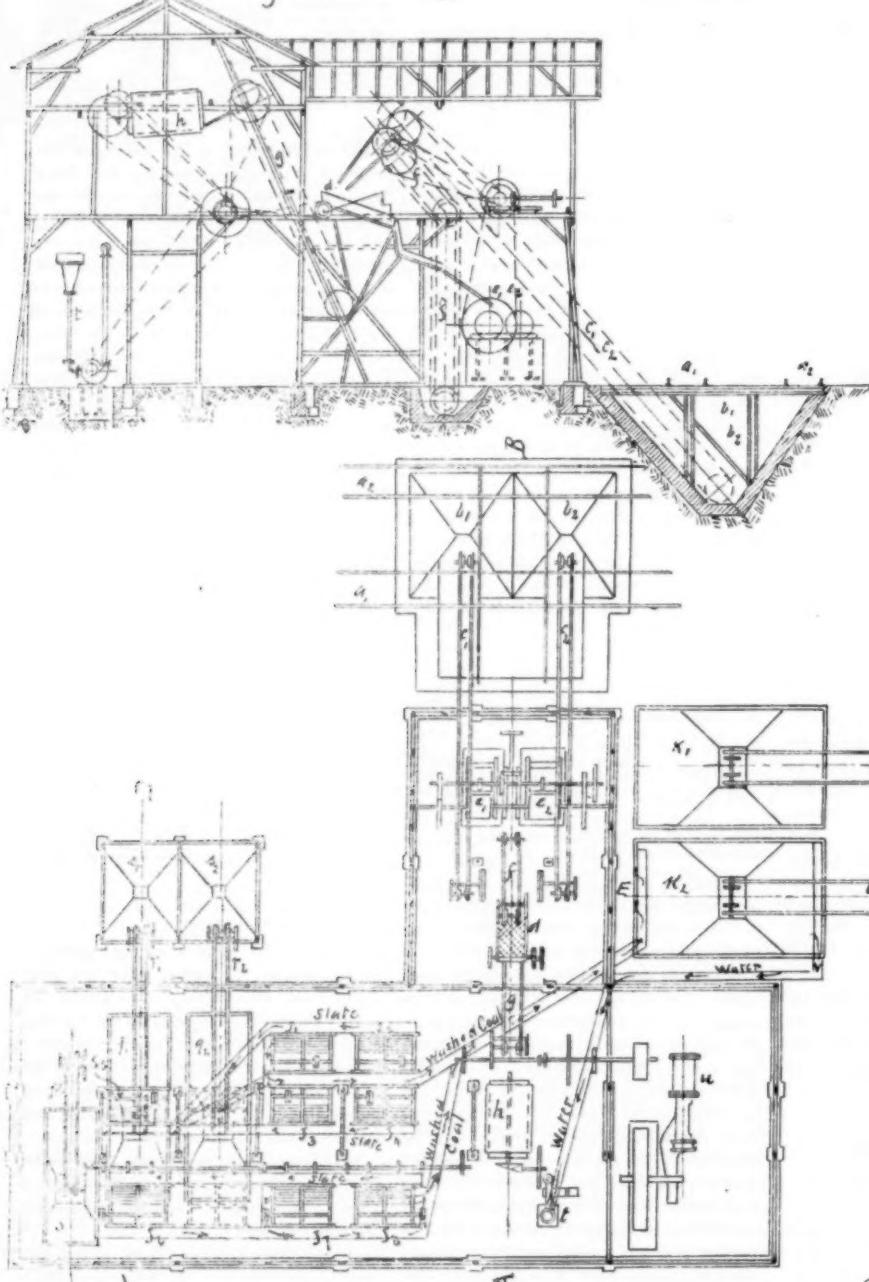


Fig. 3. Plan

Fig. 2 Section C.D

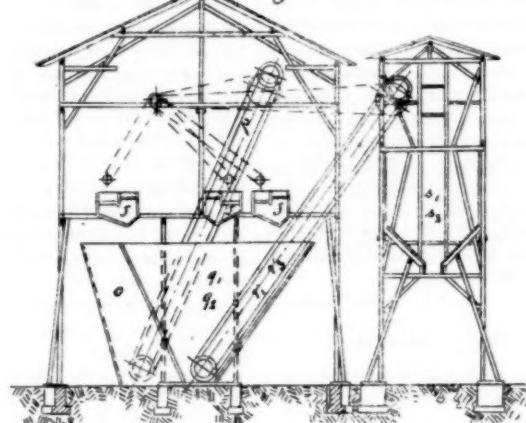
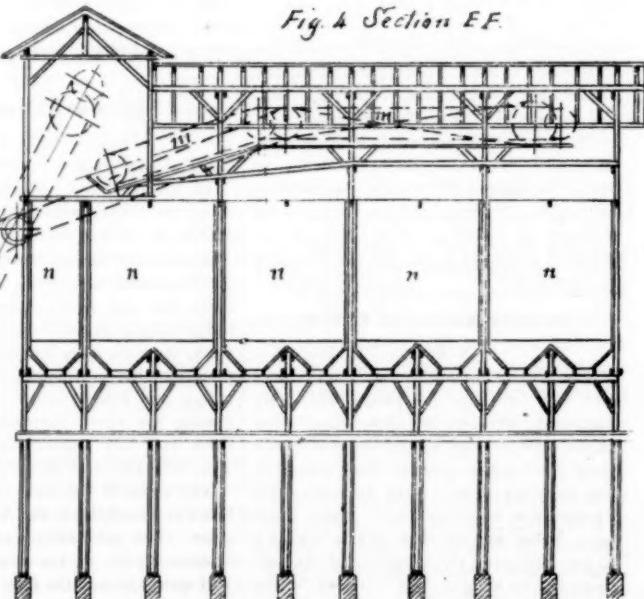


Fig. 4 Section E.F.



COAL-WASHING PLANT AT FERONA, NOVA SCOTIA.

he designed and constructed for the New Glasgow Iron, Coal & Railway Co. at Ferona, N. S.

The plant was put in successful operation in May, 1892, and has been working continuously ever since. It was constructed with the idea of washing the fine coal from various mines, the washed coal to be used for coking purposes. In con-

nection with the coal-washing plant there is a retort coke oven plant of fifty-four retort ovens, having a daily capacity of about 175 tons of coke. The coke is pushed out with a special machine, a coke pusher. The attached drawing shows the general arrangement of the washing plant, Fig. 3.

The material too large to pass through

the perforations drops into the crusher rolls c_1 and c_2 , and is again taken, after the crushing, to the shaking screen d by means of the bucket elevator f .

The coal passing through the shaking screen d is taken by means of the bucket elevator g to the separating screen drum h , which separates it into three sizes—nothing to one-eighth inch, one-eighth to one-quarter

The washed coal flows in gutters to the large elevator boot k_2 , and is elevated from there to the top of the storage tower by means of the perforated bucket elevator l_2 , which discharges on the distributing conveyor m , which carries it into the various compartments n of the large storage tower.

The two jigs shown in dotted lines, the elevator boot k_1 , and the elevator l_1 , are

The centrifugal pump t distributes the

water, which, after being used, always returns to the pump and is used over again. There is no loss in this respect except that absorbed by the coal, and enough fresh water must be added to make up for this.

It is the steam engine of 100 horse-power to drive the entire plant.

The elevators are all of special construction and have very large buckets, automatic feed, etc., and are run at a slow speed.

As will be readily seen, the entire plant works automatically, requiring only three men to operate it.

The coal washed contains from 17 to 35 per cent. of ash, besides about 2½ to 3 per cent. of sulphur; the washed coal contains in the average 10 per cent. of ash or 1 per cent. more than the fixed ash, 9 per cent., of the coal. This is a remarkably good showing, and is seldom equaled at any washing plant in existence. The fixed ash cannot be reduced by any method. Coming within 2 per cent. of the fixed ash is ordinarily considered excellent work.

The sulphur is reduced by washing from 2½ to 3 per cent. down to 1.35 per cent., that still left being the organic sulphur and that in combination with alumina or lime.

Jigs J₁ to J₆ were in the original plant; J₆ to J₈ were added when the additional retort coke ovens were built. The total capacity of the plant is now 300 tons of coal in ten hours.

Coal and Coke Notes.

THE Bayard (W. Va.) Coal & Coke Co. has organized with a capital stock of \$500,000, of which \$105,000 is already subscribed. About 6500 acres of coal lands on the West Virginia Central Railroad is owned by the company, and they already have several mines open. Coke ovens will be built in the near future. Among those connected with the company are Messrs. D. W. Smith, of Milton, Pa.; C. D. Coburn, superintendent, and J. W. Nihiser, who is president.

THE shipments of coal from the port of Norfolk, as reported by William Lamb & Co., agents at Lambert's Point, are as follows: For the week ending May 18 the shipments were 2981½ tons foreign and 31,075½ coastwise—total 34,057 tons. The total shipments since January 1, 1893, were 672,454 tons.

A GENERAL meeting of the stockholders of the Virginia & Alabama Coal Co. will be held on June 21 to act upon a resolution to rescind the action of the stockholders' meeting in October last which authorized an issuance of \$300,000 of mortgage bonds, and to act upon a new resolution to issue only \$250,000 of bonds. The regular annual meeting of the company will be held on June 22.

GOVERNOR MACCORKLE, of West Virginia, has appointed E. W. Wilson and J. C. Alderson, of Kanawha; J. P. Wilson and W. J. Johnson, of Ohio; J. J. Davis, of Harrison; Robert C. McEldowney, of Wetzel; J. M. Sydenstricker, of Greenbrier; James A. Nighbert, of Logan; R. A. Morrow, of Jefferson; A. W. Woodford, of Lewis, and Sol Cunningham, of Pendleton, as commissioners on behalf of the State to attend the Interstate Conference to be held in Chicago June 5 to discuss the evils arising from coal trusts and take some measures to bring the matter to the consideration of Congress. Minnesota made the first move to have this conference. It is expected that a number of other States will be represented.

A BILL has passed the Florida senate appropriating \$25,000 for maintaining the Florida exhibits at the Columbian Exposition, provided the railway companies and other corporations will raise another \$25,000. The chief argument in favor of the measure is that the exhibit will call general attention to the State's resources and advantages and cause a further influx of Northern capital.

Production of Iron Ore in 1892.

We have received from the United States Geological Survey the advance extract from the annual "Mineral Resources," giving the statistics of iron-ore production in 1892, as compiled by John Birkabine. The publication of this bulletin at this early date is a marked advantage, and it adds greatly to the value of the figures. We give below an abstract embracing the principal features of the report. In 1892, as in 1890 and 1891, the United States led the world in the production of iron ores and in the production of pig iron therefrom. Of these three years, 1892 showed the greatest output of iron, the figures for four years past being as follows:

	Long tons.
1889.....	14,518,041
1890.....	16,036,043
1891.....	14,591,178
1892.....	16,296,666

If, as in previous years, an advance of 1½ per cent. is made for small mines not reporting, or of which no authoritative record is obtainable, the approximate total may be given as 16,500,000 long tons of marketable iron ore mined in 1892.

The quantities of each kind of iron ore mined in 1892 were as follows:

	Long tons.
Red hematite.....	11,646,619
Brown hematite.....	2,485,101
Magnetite.....	1,971,965
Carbonate.....	192,981
Total.....	16,296,666

A comparison of these figures with the production in 1891 shows an increase of 2,319,221 long tons, or 24.86 per cent., in the output of red hematite, while the production of brown hematite decreased by 272,463 tons, or 9.88 per cent., and the output of magnetite fell off 345,143 tons, or 14.89 per cent. Carbonate shows an increase of 3873 tons, or 2.05 per cent.

The production of iron ore in long tons and the average value at the mines in each State in 1892 were as follows:

	Tons produced.	Value per ton.
Alabama.....	2,312,071	\$1.06
Virginia and West Virginia.....	747,027	1.91
Tennessee.....	406,578	1.24
Georgia and North Carolina.....	210,433	1.25
Kentucky.....	50,523	1.25
Maryland.....	40,171	2.21
Texas.....	23,903	.91
Total for South.....	3,789,706	.....
Michigan.....	7,543,544	\$2.20
Minnesota.....	1,255,665	2.46
Pennsylvania.....	1,084,047	2.03
New York.....	801,099	2.67
Wisconsin.....	790,179	1.81
New Jersey.....	405,455	2.98
Colorado.....	141,769	4.15
Missouri.....	118,494	2.01
Ohio.....	95,728	1.55
Massachusetts and Conn.....	76,265	3.27
Other States.....	44,875	2.16
Total North and West.....	12,507,060	.....
Total United States.....	16,296,636	\$2.04

MICHIGAN.

Considering the States in the order of their precedence as producers of iron ores, Michigan appears as retaining first place with an increased output. The total iron ore mined in the State during 1892 was 7,543,544 long tons, or 46.29 per cent. of the grand total for the United States, showing an increase of 1,416,543 long tons, or 23.12 per cent. over the 1891 product of the State of 6,127,001 long tons. Of the total for the State 7,228,406 long tons, or 95.82 per cent., was red hematite, giving Michigan first rank as a producer of this class of ore, with 62.06 per cent. of the nation's red hematite total. The increase in the quantity of this character of ore over the 1891 output (5,445,371 long tons) was 1,783,035 long tons, or 32.74 per cent. The brown hematite produced was 187,306 long tons, or 2.48 per cent. of the total ore mined in the State, a decrease of 270,201 long tons, or 59.06 per cent., from the figures for 1891, giving Michigan fourth place as a producer, with 7.54 per cent. of the country's total of this character of ore. It should, however, be borne in mind that there is very little brown hematite iron ore

mined in Michigan from deposits which should be classed as brown hematite, the majority being red hematite which has been partially hydrated or weathered into brown hematite ore. The balance of Michigan's output, 1.70 per cent., or 127,832 long tons, was magnetite, decline of 96,291 tons, or 42.96 per cent., from the 1891 total of 224,123 tons. As a producer of magnetite the State ranked fourth, with 6.48 per cent. of the total for the United States in 1892.

MINNESOTA.

Minnesota, in order of precedence, passed both Pennsylvania and New York in 1892, occupying third place, with a total iron-ore output of 1,255,465 long tons, or 7.70 per cent. of the total for the United States. With the exception of 5000 tons of ore classed as brown hematite mined in the Mesabi range, but not shipped last year, the whole of this amount is red hematite ore, the State also ranking third as a producer of this class of ore, with 10.74 per cent. of the total for the country. The year 1892 chronicles the first shipment (4245 long tons) from the new Mesabi range. Although there was a considerable amount of iron ore mined, much of it was stocked on account of lack of railroad transportation, but where this ore was mined in 1892 and reported it was included in the total. In the year 1893 it is probable that important shipments will be made, but much of the work will be in the way of developing, and the range will hardly be as important a contributor of iron ore in that year as is anticipated. Competent specialists have made estimates, which they claim to be conservative, which show that from ten to twenty large mines can be developed from present explorations. Each of these mines is reported to have 1,000,000 long tons of ore in sight as a minimum, the quantity being estimated from numerous excavations, test pits and bore holes. Whether these estimates need modification or not, the Mesabi range promises to be a basis for the supply of large quantities of rich iron ores which can be cheaply mined, and surprise is expressed that in opening up the excellent deposits of the Vermilion range in Minnesota, the Mesabi, with its hidden wealth of ore, was crossed so many times without having its secret betrayed, for the Mesabi range lies between the city of Duluth and the Vermilion iron range.

WISCONSIN.

The major portion of the iron ore won in Wisconsin came from the mines near Hurley, on the Gogebic range, and those on the Menominee range in the vicinity of Florence, the total being 790,179 long tons, an advance over the 1891 figures (589,481 long tons) of 200,698 long tons, or 34.05 per cent. All of the ore mined in 1892, with the exception of 15,300 tons of brown hematite, was of the red hematite variety, in which class the State occupied fourth place, supplying 6.65 per cent. of the total for the United States. Wisconsin will probably augment the output of brown hematite in future years to supply local blast furnaces.

PENNSYLVANIA.

Pennsylvania has fallen from third to fourth position as to iron-ore output, the product of 1,084,047 long tons being but 6.65 per cent. of the total for the United States, showing a decrease of 188,881 tons, or 14.84 per cent., from the 1891 output of 1,277,928 long tons. This decline was in all of the varieties of iron ore except the red hematite.

NEW YORK.

New York, like Pennsylvania, produced all four classes of iron ore, and these two States were the only ones winning all the different characters of ore last year. The 1892 output was 891,099 long tons, a decline from that of 1891 (1,017,216 tons) of 126,117 tons, or 12.40 per cent. This re-

stricted product was confined to the magnetic and red hematite varieties of ore, the other two classes showing an increase. The State occupies second place as a producer of magnetic iron ore, 648,564 long tons, or 32.89 per cent. of the total for the United States, being of this character. This amount is, however, 134,165 long tons, or 17.14 per cent., less than that of 1891, when 782,729 long tons were produced. There is but a slight difference in the magnetite outputs of Pennsylvania and New York, the former now taking first place.

ALABAMA.

Alabama continued in second place in 1892, with an increased output of iron ore, viz., 2,312,071 tons, or 14.19 per cent. of the total for the country, of which 1,657,028 tons, or 71.67 per cent., was red hematite, and 655,043 long tons, or 28.33 per cent., brown hematite. The 1891 product was 1,986,830 long tons, showing a gain in 1892 of 325,241 long tons, or 16.37 per cent., the increase in the brown hematite being 102,996 long tons and in red hematite 132,245 long tons. Alabama holds second rank as a producer of red hematite ore, with 14.23 per cent. of the total for the United States, and second rank for brown hematite, with a percentage of 26.36 of the country's total. Alabama also has some very important producers credited to her quota, although none of her mines approach the largest Lake Superior operations.

VIRGINIA.

Virginia ranks seventh as an iron-ore producer, with 741,027 long tons, or 4.55 per cent. of the total for the United States in 1892. Of the State's total 711,753 long tons, or 96.05 per cent., was of the brown hematite variety, giving the State first place as a producer of this class of ore, with 28.64 per cent. of the total for the entire country. Of the balance 26,120 long tons was red hematite ore and 3154 tons magnetite.

TENNESSEE.

According to the reports furnished this office, Tennessee shows a decrease in the amount of iron ore mined in 1892 of 137,345 long tons, or 25.25 per cent., the figures for 1892 being but 406,578 tons, as compared with 543,923 long tons in 1891. Of the amount mined in 1892, 63.16 per cent., or 256,756 tons, was red hematite ore, and the balance, 36.84 per cent., or 149,792 tons, was brown hematite. With the abundance of red and brown hematites there seems no especial reason, beyond a spasmodic restriction, to account for a decrease in the ore output of Tennessee.

The list of mines producing 50,000 tons or more of iron ore in 1892 includes the following in the South:

	Tons.
Lady Ensley, Alabama.....	142,402
Sloss, Nos. 1 and 2, Alabama.....	140,946
Irondale, Nos. 1, 2 and 3, Alabama.....	123,123
Inman, Tennessee.....	90,876
Graves Gap, Alabama.....	73,000
Shelby, Alabama.....	70,000
Longdale, Virginia.....	68,537
Stephens, Alabama.....	62,400
Roane Iron Co., Tennessee.....	57,910
Tannehill, Alabama.....	50,000
West Point, Tennessee.....	50,000

Southern Iron Notes.

RECEIVERS of the Lady Ensley Coal & Iron Co. have asked the Birmingham, Ala., court for permission to start up one of the Sheffield furnaces.

The Lookout Iron Co.'s finishing mill has resumed operations under the receiver's charge. The rest of the plant will be started up as needed.

THE extensive brown hematite and red fossil ore fields east of Athens, Tenn., are now being developed. These deposits are claimed to be among the largest in the South.

ONE of the De Bardeleben Coal & Iron Co.'s furnaces at Oxmoor, Ala., is producing a large quantity of pig under John Shannon's management. The other stack is being relined and improved with a new bell and rim.

MECHANICAL.

An Electric Percussion Drill.

The electric percussion drill, since it was first put into practical operation, has undergone many changes, each tending



FIG. 1.

towards perfection, until today it can compete successfully either with the steam or compressed air drill.

from the power station in one direction. The manipulation of the drill is in every respect as simple as that of the steam or air drill, stopping and starting being accomplished by merely throwing a handle to the right or to the left, making or breaking the contact between the cable and the terminals of the coils. Not the slightest difficulty is experienced in lubricating the wearing parts or in handling the drill.

The general dimensions of the "type E" drills, three of which are doing all the deep-hole drilling for the quarry, are:

Length over all.....	49 inches
Outside diameter wrought-iron tube.	7½ "
Length of stroke.....	5 to 7 "
Blows per minute.....	380

The generator which supplies the power is of the bipolar type, running at normal speed, and is provided with a device for directing the current alternately into the upper and lower coils of the drills. The difference of potential at the fixed brushes of the generator is 240 to 250 volts.

The generator is belted to a 9x12-inch straight-line engine supplied with steam at ninety pounds pressure from a horizontal tubular boiler, fuel for which is brought for three miles over the cableway in the buckets used to transport the lime rock from the quarry to the works. As yet no estimate of cost of repairs can be given, because up to date there have not been any. Should, however, any part break down it

In the new plant the main building is considerably larger than that in the old works, and equipped with the latest and best machinery for manufacturing a full line of sheet-metal goods. The office and other buildings are now under contract, and other buildings will be erected to the soon as the contract is made. The erection of these tanks, while it will interfere with the barrel manufacturers, will be of great advantage to the large producer, resulting in a saving of \$1200 to \$1500 a season, and in the same ratio among small producers. This enterprise has already spread alarm

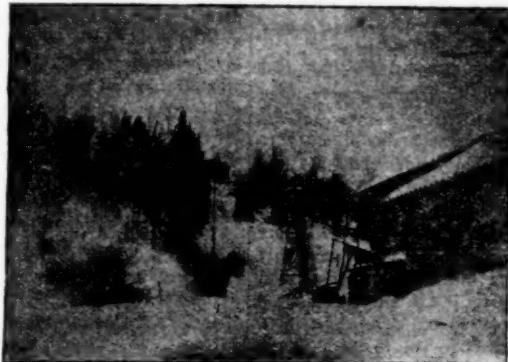


FIG. 3.

left of the works so soon as the present lease on that part of the ground has expired.

While the fire seriously impeded the company's operations, it put forth every effort to overcome all obstacles, and has been so successful that the trade for the first four months of this year has been greater than

in the camp of the barrel manufacturers. At a meeting of representatives of barrel-makers held in Savannah on the 19th inst., they failed to reach any agreement for the purpose of maintaining or advancing the price of barrels. The consequence is that a rate war has been declared, and prices



FIG. 2.

One of the most interesting percussion drill plants is that in operation at the limestone quarries of the Solvay Process Co., near Syracuse, N. Y. This plant has now been working continuously for several months, and the excellent results obtained, both in amount of work done by the drills and the convenience and economy of their operation and maintenance, have given thorough satisfaction to the company first undertaking their general employment. Installed by the General Electric Co. at the commencement of the past winter, the drills have operated without any interruption from the intense cold, and have practically demonstrated the advantages derivable from the use of electricity in quarry work. Had steam been the only available power, the loss in transmission by condensation at 20° below zero would have been so great that the drills could not have been worked. The quarry, as will be seen from the cut, is situated in a desolate spot on an elevated plateau, where the intense cold found full scope for action.

At the present time three "type E" General Electric Co.'s drills are in continuous operation ten hours per day drilling holes from six to ten feet in depth and two to two and a-half inches in diameter at the top. The rate of drilling, according to the record kept by the superintendent, is from forty-five to seventy-five feet per ten hours, averaging fifty feet per day, or 1500 feet per month of thirty days. The average distance of the drills from the power station is about 2000 feet at the present time, the circuit, three lines of bare No. 0 copper wire, being extended to a distance of 3000 to 3500 feet

can instantly be replaced, as all the parts are interchangeable.

The plant has aroused widespread interest among quarry operators in general, and has been visited and carefully inspected by many who appreciate the good things which advanced science offers.



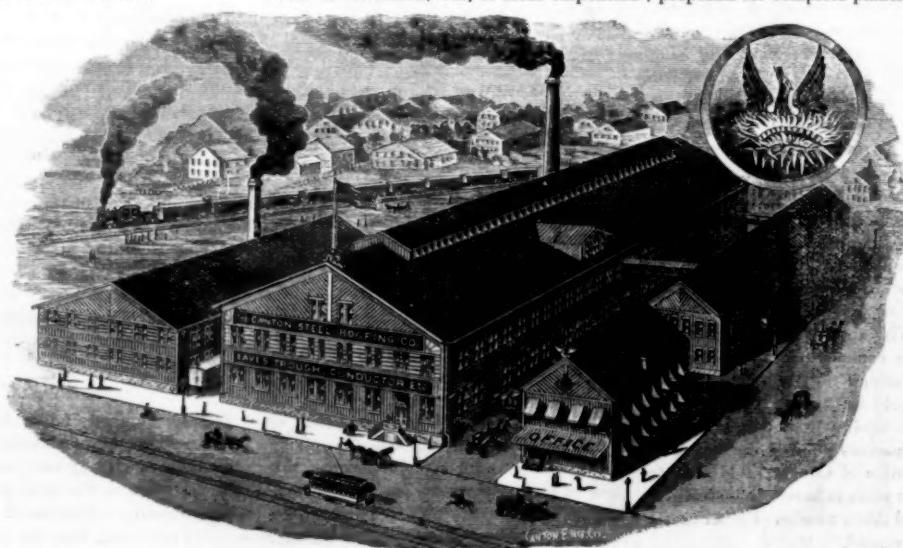
FIG. 4.

during the same time in any preceding year. An excellently-prepared exhibit of its products has been placed in section H, northwest corner of the manufactures building.

THE movement among the naval-stores men of Savannah, Ga., to erect turpentine

are expected to be cut and to fluctuate until a combine is formed.

MR. JNO. N. ADAMS, of Richmond and Irwin, Va., has received instructions from the syndicate that is operating Goochland mica mines under his supervision, to secure proposals for complete plants for treatment



NEW WORKS OF THE CANTON STEEL ROOFING CO.

New Works of the Canton Steel Roofing Co.

The accompanying illustration gives a good view of the new works of the Canton Steel Roofing Co., of Canton, Ohio, which replaces the one destroyed by fire on December 7 of last year.

tanks is about to take definite shape, as Mr. Plant is expected to sign the agreement in regard to their position on the Savannah, Florida & Western wharves. Arrangements will be made at once to permanently organize a stock company among dealers in naval stores for taking charge of them as

of auriferous sulphides, grinding mica, reducing spars and quartz, treating asbestos, burning lime, etc. These plants will all be fully completed and operated by steam-power. The syndicate has subscribed \$250,000 as working capital, so that the works will number among the largest in the South.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department, on pages 316 and 317.]

Lumber Directory.

Readers of the MANUFACTURERS' RECORD who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

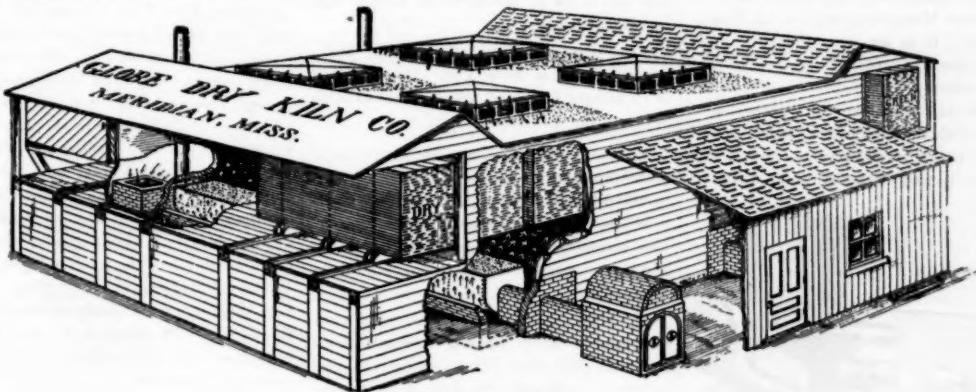
A New Woodworking Company.

A company has been formed at Biloxi, Miss., for the purpose of doing a general milling, building and lumber business, and articles of incorporation filed. The company is to be known as the John R. Harkness & Sons Building & Milling Co., with a capital stock of \$5000, divided into fifty shares of \$100 each. The incorporators are John R. Harkness, W. T. Harkness, Giles A. Harkness and J. Louis Harkness. A new steam planing mill has been built, fronting on Pass Christian, and is fitted with all the latest modern machinery for turning out all classes of wood work. An immense amount of lumber is carried by this company, consisting of cypress brought from the swamps around Slidell, La., while the native woods of Mississippi, including the long-leaf yellow pine, are worked up after being well seasoned.

front side, convenient to the operator. For the back table an adjustment is provided so a hollowing and crowning joint can be made. A separate adjustment for the tables is made so that they can be drawn back to admit of taking the knives off without changing the position of them to

machine or chokes it, and at the same time the planer is often run without more than one-half of its capacity being obtained, consequent on the difference in width of material and depth of cut being made, with the same rate of feed for narrow or wide, heavy or light cut, necessarily dimin-

the first requisites of seasoned lumber. The cut herewith given is a reproduction of one of the kilns having a capacity of 20,000 feet of lumber per day. The fittings consist of two furnaces, two radiators and fixtures appertaining thereto. Its strength is in its simplicity of construction and ope-



THE GLOBE DRY-KILN.

the cut of the cylinder. The yoke holding the cylinder is provided with three bearings, self-oiling, one bearing being outside of the driving pulley. The yoke is also provided with an adjustment for leveling the cylinder with the table. Still another advantage possessed by this planer is an

ishing the output of the machines.

Inventors have for a long time endeavored to overcome these difficulties, and the arrangement shown herewith appears to have reached the desired end. By its use the operator can vary or regulate the rate of feed to the full capacity of the machine, regardless of the depth of cut, width of material or quality of wood. The rate of feed is under the entire control of the operator and can be changed at will.

The motion, as will be seen, is imparted from a disc driven by countershaft to a paper friction disc, which, being moved across the face of the driving disc, gives the varying velocity of feed as it is brought near to or farther from the centre of the driving disc. This, it will also be seen, can be done very quickly—in fact, instantaneously. The use of the device, it is stated, will add at least one-third to the output of the machines to which it is applied. The device is simple in construction, durable and very practical, as well as moderate in cost. It will be an object of interest to anyone connected with woodworking machinery in general.

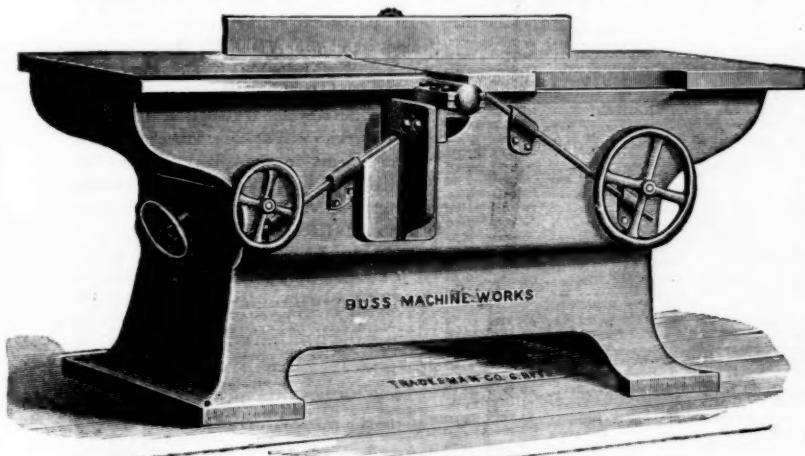
The makers have an extensive exhibit at the World's Fair, at section 12, column F 50, in the machinery hall, where their planers and other tools can be seen.

An Improved Dry-Kiln.

A new heating apparatus, the Globe dry-kiln, made by the Globe Dry-Kiln Co., of Meridian, Miss., for drying lumber, brick and pottery, is attracting a great deal of interest in the lower Gulf States, and a cut

ration, and it is claimed to possess great lasting qualities by reason of its having no machinery to get out of order—no boilers or steam pipes to leak or no cold-water pipes to burst from freezing; therefore, there is no leaking from unequal expansion, which leads to mildewed lumber. This new heating appliance, having no steam to contend with, renders it unnecessary to make joints air-tight, there being but one joint in the whole kiln, and that where the stack connects with the radiator. The connection is made as follows: A flange ten inches in diameter, with a projection of six inches, is bolted on the back of the radiator, over which a stack is slipped for three inches and then pinioned, thereby leaving three inches for the end of the radiator to expand. There is never over two inches of expansion, and there is therefore an inch left for "play."

A glance at the cut will show the simple principles used in its construction. Hot air generated in furnaces is used, and then conveyed to the radiators, from which heat is secured, making mildewed or blue-sap lumber impossible. The temperature of the kiln can be raised or lowered at will, to suit the nature of the lumber to be dried, by means of a series of dampers and valves so arranged as to be operated from the front of the kiln. It can also be kept at a certain degree of heat. Free circulation without the use of boiler, engine or blower is secured by an air passage with an opening of 144 square inches, through which the cold air is drawn. The natural circulation is caused by the heat from the radiators.



NEW "BUZZ" PLANER.

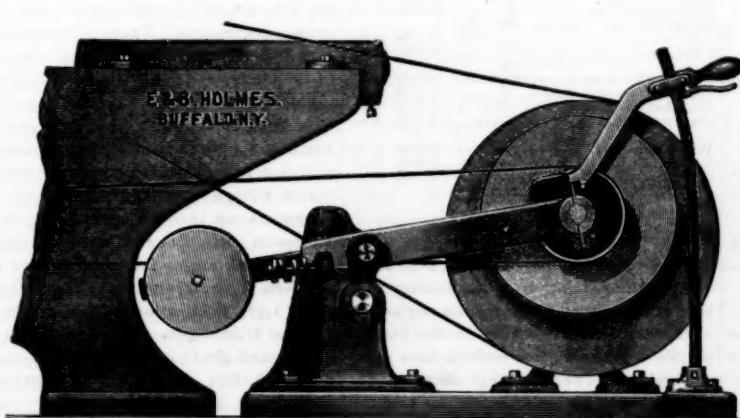
A New Planer.

The Buss Machine Works, Grand Rapids, Mich., has recently put on the market a new "buzz" planer which possesses many advantages. The main part of the frame is cast in one piece, special attention being taken to provide against all strain or change

adjustable bevel fence which can be adjusted to any beveling or mitring. The planer is made in 20, 24, 30 and 36-inch widths.

A Variable Planer Feed.

The device shown in the accompanying illustration is an arrangement for producing



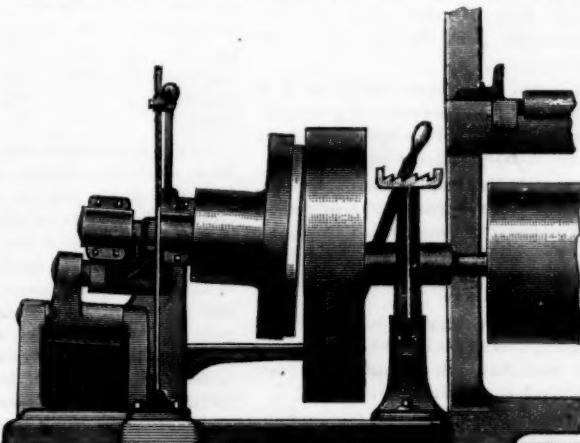
VARIABLE PLANER FEED.

of position that might occur from any unevenness in the floor. The adjustment of the table is provided for by using one long incline, so that the tables are adjustable to and from the cylinder, on the same radius of the cut of the cylinder. The hand-wheel regulating the adjustment is on the

a variable feed on planing machines, which has been placed on the market by E. & B. Holmes, of Buffalo, N. Y.

One difficulty which has always attended the operation of planing machines is that it was necessary to work at a uniform rate of feed, and this many times strains the

of which is herewith given. It is claimed by the inventor to be built upon the most scientific principles, using direct heat, and is a kiln in which boilers, engines and blowers are thrown to the winds. The inventor is a man of wide experience in the lumber business and who knows

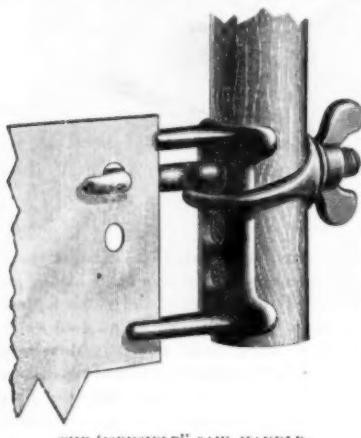


This air passes then between the radiators and an eight-inch wall, where it is heated and then turned loose into the room containing the green lumber. By referring to the cut it will be noticed that the ventilators are so arranged as to draw the heated air through the lumber, and, after drying

it, out into the open air. These kilns are built with a capacity of from 5000 to 50,000 feet per day.

A New Saw Handle.

The accompanying illustration gives an idea of the "Sensible" saw handle made by the Gwinner Manufacturing Co., of Hamilton, Ohio. It is an invention that bids fair to come into use wherever saws are found necessary. "Sensible" saw handles are made of second-growth timber and mounted with malleable-iron attachments. Arms on the reversible plate form abutments for the end of the saw. One side of



THE "SENSIBLE" SAW HANDLE.

each arm rests against opposite sides of the saw to keep the handle in line; the other side is short to facilitate attaching or detaching the handle. Either of the holes in the saw may be used by inserting the bolt through a corresponding hole in the plate. Some of the advantages of this handle are that it adds to the length of the saw and is quickly attached or detached. The parts are retained in place when the handle is detached. The New York agents are Harman & Dixon, 118 Chambers street.

Southern Lumber Notes.

ON the 5th inst. at Orange, Texas, the L. Miller Shingle Co. cut and bunched 300,000 shingles, said to be the largest day's cut ever made in Texas.

THE Reliance Lumber Co., of Beaumont, Texas, booked orders for 2,300,000 feet of lumber last week.

THE East Union saw mill, located about six miles from Summit, Miss., in Pike county, was burned on May 11. The damage sustained was about \$7000. Rebuilding will commence at once.

VAN OSDEL BROS. & CO., of Shady Hill, Tenn., have removed their saw mill to Antioch, Miss., at which point they have secured some good ash, oak and poplar timber.

IT is said by a recent cablegram from Havana that the importation of pitch pine lumber from the Gulf ports since October 1 last has been the largest ever known.

THE McMillan Lumber Co., of Stockton, Ala., has recently had built a side-wheel towboat under the supervision of George Morrison, of Mobile. This company will use its towboat between Mobile and Stockton.

MR. J. M. STIGLETT, who has been operating a mill near Handsboro, Miss., on Fritz creek, has built an entirely new plant of 25,000 feet capacity daily.

THE Arkadelphia Lumber Co., of Daleville, Ark., is running on extra time in order to fill orders. A new Hall & Brown molder has been added to its mill. It has a capacity of 100,000 feet in ten hours.

WORK on Wilson & Boring's stave factory at Johnson City, Tenn., has been commenced and will be pushed to an early completion. The plant is to have a daily capacity of 20,000 staves and will employ a large number of hands. Messrs. Cooper Bros., a well-known firm of lumber dealers

at Johnson City, contemplates establishing a hoop factory to supply the above plant, and will definitely decide upon same during the week.

GONSONLIN, BREAUX & RENOUDET have purchased the Witworth mill property and will put same in operation as soon as logs can be obtained.

THE steamship Algonquin, from Jacksonville, Fla., to New York city, included in its freight last week 200,000 feet of lumber and four carloads of shingles.

A TRACT of pine lands in Wayne and Camden counties, Ga., has been purchased by the Florida Central & Peninsular Railroad Co. for crossties and bridge timber. The property consists of about 7000 acres and was owned by Mr. Robert J. Moyer, of Waynesville.

A VALUABLE tract of timber land containing 900 acres heavily timbered with oak, ash, gum, hickory, sycamore, elm and cypress is offered for sale or exchange through the advertising columns of the MANUFACTURERS' RECORD. This land lies in the Yazoo Delta some sixty miles below Memphis, in the heart of the best cotton-growing section of Mississippi, and on a watercourse which is navigable throughout the year.

MR. W. H. COLE, of Cherry Valley, Ark., has in contemplation the establishment at Waynesville, N. C., of a large saw mill and woodworking factory for turning out spokes, barrels, handles, car and railroad material, etc. Certain inducements are required in order to secure the location of the plant, and the citizens of Waynesville will hold a meeting this week to formulate plans for meeting them.

THE Evans Land & Lumber Co., of Ellijay, Ga., whose business has been in the hands of a receiver, has at last been settled. The Elmira National Bank of New York has paid the company's debts and now own their large plant with all patents, land and timber, but the mill and other property of the company will be sold at Ellijay on the first Tuesday in July next. A new company is being organized and will operate the mill in the near future on a large scale. The land and timber right of the company amounts to 50,000 acres.

THE Alabama Lumber Manufacturers' Association held a meeting in Montgomery on the 19th inst. Thirteen mills were represented and nine by proxy. They adopted the strip count absolutely, also the revised system of grading lumber, and agreed to engage an official association inspector. Association meetings were arranged for, sixty days apart, at Montgomery during the balance of the current year. The following officers were elected: W. W. Smith, president, and John L. Kaul, secretary. A committee to formulate a price-list was appointed to meet on the 26th inst. in Montgomery.

A DEAL was consummated at Meridian, Miss., on the 17th whereby the Globe Dry-Kiln Co. of that city has secured an increase of \$10,000 to its capital stock, and will enlarge its plant in proportion thereto. Mr. William Graham, the former president of this company, has secured the co-operation of Messrs. John Kamper, of Enterprise, and G. W. Kamper, of Hattiesburg, Miss., and these gentlemen will add \$10,000 to the working capital of the company, and its facilities are to be otherwise increased. The new members of the company are among the leading lumbermen of Alabama, Louisiana and Mississippi, being among the largest owners of pine lands and milling properties in those States. The plant for the manufacture of the Globe dry-kiln machinery will be established at Meridian, Miss. The officers of the new company are: Mr. John Kamper, president; Mr. William Graham, vice-president and general manager, and Mr. G. W. Kamper, secretary and treasurer.

LUMBER MARKET REVIEWS.

Baltimore.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, May 25.

There has been a better volume of business in the lumber market during the week, and under more favorable weather business in all the yards has been greatly facilitated. Commission men and manufacturers generally report trade as considerably improved, though orders are more numerous and the outlook generally encouraging. Receipts of North Carolina air-dried lumber still continue liberal and the supply ample for all requirements, which constitute but a moderate demand at the moment. Cypress lumber is about steady, with stocks not excessive and the inquiry light. There is fair movement in white pine, and several large lots have changed hands during the week. The demand for hardwoods is better, and for ash, walnut, oak and other woods for finishing interiors there is a good trade demand. Furniture manufacturers are purchasing more freely, and with stocks light prices hold very steady for all desirable woods. Box manufacturers and planing mills report a good business, with orders coming in freely at fair prices.

The following list represents the prices current at this port:

VIRGINIA AND NORTH CAROLINA PINE.

5-4X10 No. 2, kiln dried.....	\$16 25@
5-4X12 No. 2, ".....	17 75@
4-4X10 No. 1, ".....	19 75@
4-4X12 No. 1, ".....	20 75@
4-4 narrow edge, No. 1, kiln dried.....	17 25@
4-4 wide edge, ".....	21 75@
6-4X5, 10 and 12, ".....	23 25@
4-4X5, 10 and 12, ".....	23 50@
No. 1 edge flooring, air dried.....	15 50@
No. 2 edge flooring, ".....	12 50@
No. 1 12-in. thick stock, ".....	16 50@
No. 2, ".....	17 50@
4-4 edge box or rough wide.....	12 50@
4-4 " " (ordin'y widths).....	9 00@
4-4 " " (narrow), ".....	8 00@
4-4X12 ".....	10 00@
4-4 narrow edge.....	8 00@
all widths.....	7 50@
10x16 wide.....	8 00@
Small joists, 2½-12, 14 and 16 long.....	8 00@
Large joists, 3-16 long and up.....	9 50@
Scantling, 2x3-15 and up.....	10 00@

WHITE PINE.

1st and ad clear, 4-4, 5-4, 6-4 and 8-4.....	48 50@ 51 50
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 00@ 44 00
Good edge culls.....	14 50@ 15 50
Good stock.....	17 00@ 17 50

CYPRESS.

4-4X6, No. 1.....	10 50@ 20 50
4-4X6, No. 2.....	14 00@ 15 00
4-4X6, 16 feet, fencing.....	12 00@ 13 00
4-4X6, rough.....	8 50@ 9 00
4-4 rough edge.....	8 50@ 9 00
4-4 edge, No. 1.....	17 50@ 18 50
4-4 " No. 2.....	12 50@ 13 50

HARDWOODS.

Walnut, Nos. 1 and 2.....	75 00@ 100 00
Nos. 1 and 2.....	90 00@ 100 00
5-4, 6-4 and 8-4.....	95 00@ 110 00
Nos. 2½, 3 and 4.....	125 00@ 130 00
Newell stuff, clear of heart.....	125 00@ 130 00
Culls.....	30 00@ 35 00

Oak.

Cabinet, white and red, plain sawed and good 1 and 2, 8 in. and up, 12 to 16 feet long, 4-4.....	35 00@ 40 00
5-4 to 8-4.....	35 00@ 40 00
Quartered white, 1 and 2 quality, all figured, 6 in. and up wide, 4-4.....	50 00@ 53 00
Culls.....	10 00@ 15 00

Poplar.

Nos. 1 and 2, 3-4.....	22 00@ 24 00
Nos. 5, 6 and 8-4.....	27 50@ 30 50
In yellow pine cargoes, log run stock.....	30 00@ 34 50
Culls.....	12 00@ 15 50

SHINGLES.

Cypress, No. 1 hearts, sawed, 6x20.....	7 50@ 7 75
No. 1 saps, sawed, 6x20.....	5 50@ 6 00
No. 1 hearts, shaved, 6x20.....	6 50@ 7 00
No. 1 saps, shaved, 6x20.....	5 00@ 5 25

LATHES.

White pine.....	2 70@ 2 75
Spruce.....	2 60@ 2 75
Cypress.....	2 15@ 2 20

Norfolk.

[From our own Correspondent.]

NORFOLK, VA., May 22.

Everything relating to the lumber and timber trade is at present unusually active at this port, and at no time in the history of this industry has the outlook been more promising. The growing demand for North Carolina pine from all parts of the country has stiffened the market considerably, and, while prices of the association are well maintained, it is probable that a further advance on certain grades may take place in the near future. Orders are coming in freely, and many mills have more on file than they can well attend to at the moment. Receipts of air-dried lumber continue heavy, and boards of the proper dimensions are in good demand. The inquiry for local building purposes is con-

siderable and larger than usual on account of the number of private dwellings and warehouses under construction. The following carefully compiled statement of the receipts of lumber at this port will give the best idea of the large volume of business now being transacted.

Mr. Samuel R. Borum, secretary of the Norfolk Chamber of Commerce, reports the receipts of lumber at the port for the month of April and for three months ending March 31 as follows:

Article.	April.	Three months.	Total.
Lumber, feet.....	34,649,152	54,050,642	88,699,794
Logs, feet.....	11,570,747	20,837,913	32,402,760
Staves.....	655,529	1,705,639	2,421,168
Shingles.....	6,280,350	9,434,410	15,714,760
Railroad ties.....	7,180	41,575	48,755

The above statement is interesting when it is remembered that in the month of January last scarcely any business was transacted on account of the severe frosts and interruption of navigation. From the above showing the receipts withal are far in excess of the corresponding period last year, and for the six months of the current year will be over 50,000,000 more than last year on July 1. The shipments during the past week have been very heavy, and a number of vessels are awaiting cargoes. The very large cargo just shipped to Wiley, Harker & Co., of New York, aggregated over 500,000 feet, the lumber for which came from the Brainerd Manufacturing Co.'s mill at Edenton, N. C. Foey Bros. have sold their saw mill and wharf property in Berkley to Whispell & Denby, of this city, who will at once make extensive improvements in the plant. News was received here on Friday last of the burning in Howard, N. C., of six dry-kilns belonging to the Greenleaf Johnson Lumber Co.

Kiln-dried North Carolina pine lumber f. o. b. vessel at this port is quoted as follows:

5-4 rift No. 1.....	\$27 50@
5-4 rift No. 2.....	30 00@
5-4X10 No. 1.....	30 00@
5-4X12 No. 1.....	30 00@
5-4X10 No. 2.....	35 00@
5-4X12 No. 2.....	35 00@
5-4 edge No. 1.....	17 50@
5-4 edge No. 2.....	13 50@
4-4 rift No. 1.....	25 00@
4-4 rift No. 2.....	25 00@
4-4X10 No. 1.....	18 50@
4-4X12 No. 1.....	19 50@
4-4X10 No. 2.....	18 50@
4-4X12 No. 2.....	18 50@
4-4 edge No. 3.....	9 50@
5-4 edge No. 3.....	10 50@
4-4X8, 10 and 12 culls or box.....	9 50@
4-4X5-4 edge, cull or box.....	10 50@

In carload lots \$1.00 additional per thousand on Nos. 1 and 2, and fifty cents additional per thousand on No. 3 and box.

Savannah.

[From our own Correspondent.]

SAVANNAH, GA., May 23.

A fairly active trade in lumber and timber has been the rule at this port during the past week, and the demand is very decided for all well-manufactured stuff of the proper dimensions. There is considerable activity at all milling points in this section of the State, and mills are generally well supplied with orders. Receipts at the port have been liberal, and stocks on hand are ample to supply the local building demand and that from Northern ports. There is a better foreign demand, and among the shipments are included several cargoes for European ports. The shipments of lumber for the week are as follows: 380,087 feet for New York, 485,732 feet for Philadelphia, 1,579,390 feet for Baltimore, 770,950 feet for Wilmington, Del., 65,000 feet for Boston and 460,659 feet for Oporto—total, 3,741,818 feet. Among the clearances there were 404,000 shingles, 1107 cedar logs and 6640 white oak staves. The American ship Caravan left this port last week for New York with 21,100 crossties. The tone of the market for all desirable lumber is firm, with no material change in values. In lumber freights rates are steady, with a scarcity of handy-sized vessels for the coastwise business. The rates from this and nearby Georgia ports are quoted at \$4.62½ to \$5.50 for a range including Baltimore and Portland, Me. Foreign

business is more or less nominal. To Buenos Ayres or Montevideo \$12.50; Rio Janeiro \$13.50; to Spanish and Mediterranean ports \$11.00 to \$11.50, and to the United Kingdom for orders rates are nominal for lumber at £4 5s. per standard. Steamer rates to New York and Philadelphia are quoted at \$7.00, to Boston \$8.00 and to Baltimore \$5.50.

Charleston.

[From our own Correspondent.]

CHARLESTON, S. C., May 22.

The business in lumber during the week has shown more activity in nearly every department, and the demand is very pronounced from all domestic ports. The reports from the milling section are of an encouraging character, and nearly all the mills are well supplied with orders. In the list of values there has been no material change, and for all desirable grades of the best manufactured stuff prices are firm. The clearances for the week were as follows: Schooners Oscar C. Schmidt with 440,000 feet of lumber, Maggie M. Keogh with 465,000 feet and Genevieve with 440,000 feet, all for New York. The schooner Thomas J. May took 460,000 feet to Philadelphia and the Mary Sanford 450,000 feet to Boston. Coastwise freights on yellow pine are firm here and handy-sized tonnage scarce. The quotations for merchantable lumber are \$14.00 to \$16.00 for city sawed and \$12.00 to \$14.00 for railroad. Square and round timber is quoted \$9.00 to \$13.00 for railroad and \$8.00 to \$11.00 for raft. Dock timber is \$4.50 to \$6.50 and shipping \$8.50 to \$10.50. Shingles are firm, with a good demand at \$5.00 to \$7.00 per thousand.

EXPORTS OF LUMBER FROM CHARLESTON FROM SEPTEMBER 1, 1892, TO MAY 19, 1893.

Exported to	1892-'93. Feet.	1891-'92. Feet.
New York.....	30,324,731	22,874,623
Boston.....	1,368,000	
Philadelphia.....	5,240,392	5,634,000
Baltimore.....	1,110,000	1,513,978
Other United States ports.....	1,009,000	3,108,089
Total coastwise.....	37,052,023	33,130,610
Great Britain.....		
Palermo.....		
France.....		
West Indies.....	3,151,397	1,962,300
South America.....		177,000
Nova Scotia.....		
Other foreign ports.....		578,174
Total foreign.....	2,151,397	2,717,474
Grand total	39,203,420	35,848,084

Pensacola.

[From our own Correspondent.]

PENSACOLA, FLA., May 23.

The market here has been rather quiet, especially for timber, and during the past week trade has been very light. The market for sawed timber abroad is reported as bad as possible can be and prices away down, so that here operators are not moving any at the moment. The *Timber Trades Journal* of the 13th inst., in its review of the London market, says: "The pitch-pine stocks in dock-ponds have worked down considerably since the beginning of the year, and we hope there is now a fair prospect of the supply being equalled by the demand. It rests with the shippers, however, to what extent this will be borne out, and, as far as we can learn at present, the cargoes now on their way are by no means of formidable proportions. With reference to the long-talked-of combination of Southern timber producers to curtail the supply to this and other markets, importers are very skeptical about the result." The evident intention of shippers at this port is to curtail shipments for the present, and by this course a better market may be created abroad in the near future. The effect of low prices in Europe has been somewhat disastrous to sawed-timber mills in this State and Mississippi. Receipts at present are light, and the heavy stocks that have been coming to market have let up considerably. The demand from River Platte and Rio Janeiro has not

been so urgent during this month, and the falling off is attributed to several causes. It is true that a slight advance has occurred, but this is not likely to divert the trade from this section, and it is probable that those markets themselves may be more or less depressed at the moment. The demand during the week has been mostly foreign, with a fair coastwise business. The total shipments aggregate 6,421,000 feet, with nearly 1,500,000 shipped to Philadelphia. Freight rates on lumber are steady and unchanged, with a number of vessels offering. Among the clearances this week was the Norwegian iron sailing ship Fjeld, taking a cargo of lumber for London consisting of 1,720,000 superficial feet.

Mobile.

[From our own Correspondent.]

MOBILE, ALA., May 23.

The market during the week under review has been quiet in matters relating to lumber and timber, and the volume of business is of moderate proportions. The outlook for timber has not improved, and low prices in Europe have a depressing effect upon the local market. During the summer season a number of mills are likely to shut down for repairs and hold on for a rise in the market. Hewn timber is dull at ten to eleven and a-quarter cents per cubic foot, and sawn timber eleven to eleven and a-half cents per cubic foot of forty feet average. The shipments of hewn timber for the week aggregate 24,832 cubic feet cleared per steamship Tabitha for Amsterdam. Of sawn timber 36,000 cubic feet were cleared for the same port. The business in lumber, while not of great proportions, is very fair, and the demand constant from the West Indies, Central and South America and Northern ports. The clearances for the week aggregate 1,145,413 feet, and since September 1, 1892, they amount to 59,314,327 feet, against 45,470,641 feet for the corresponding period of 1891-92. The scarcity of cypress timber is interfering considerably with the shingle trade, and the supply has been wholly inadequate to keep the various mills running. The price of cypress timber is very firm under the urgent demand and notable scarcity, and prices range from thirteen and a-half to sixteen cents. Freight rates on lumber are unchanged and more or less nominal. To the West Indies \$6.00 to \$8.00 per thousand for lumber, coastwise \$6.00 to \$6.50 and Rio Janeiro \$18.00 nominal. Timber to the United Kingdom is quoted 28s. to 29s. per load, sawn timber per standard £4 7s. 6d. to £4 12s. 6d., deals per standard £4 5s. to £4 10s.

Beaumont.

BEAUMONT, TEXAS, May 21.

The situation this week at all milling points in this section is very encouraging, and the volume of business in lumber and timber continues of fair proportions. Orders are coming in quite freely from all points of the State, and mills are generally running at their full capacity. Several new sections in Nebraska have been opened up by way of Bowie and the Rock Island road, and considerable trade is expected from these sources. A number of vessels are clearing from Sabine Pass loaded with lumber. The Beaumont Lumber Co and the Texas Tram & Lumber Co. are loading vessels for Tampico and other ports in Mexico. Vessels are also due to load for New York and other Northern ports. The Beaumont *Journal* in its review of the lumber market says: "The assurance given by late rains of good crops of corn and cotton has not caused anything like a rush of orders as it was thought would result, but it can be stated that the mills are loading and shipping as many cars per day as can be accommodated upon their switches, and this statement is sufficient to indicate that trade is all that could be desired. All classes of material

are sharing in the movement." As to the capacity of some of the mills at this point the Texas Tram & Lumber Co.'s saw mill seems to hold up its record for a large daily output of lumber. During the week from the 11th to 17th inst., inclusive, this mill was run five and three-quarter days, cutting in that time 612,890 feet, an average of more than 106,000 feet per day. The Long Manufacturing Co.'s shingle mill has closed down on account of the scarcity of cypress timber. It will not start up for two or three months. The Reliance Lumber Co. is now getting its timber down the river, which has risen sufficiently during the week to get out about 3,000,000 feet, enough to run the mill until about the 1st of July. At Orange the mills are all very busy, and lumber shipments by rail have been quite brisk and cars plentiful, while prices are generally firm and unchanged. At Westlake and Lake Charles, La., there is a good movement in progress, and all the mills are well supplied with orders.

Iron Market Review.

The iron market during the past week has shown little or no change, though there has been a good proportion of business. The condition of the financial situation is now showing among both producers and consumers, and it is not likely that trade will improve until the worry about money matters has passed.

In Chicago there has been less demand for iron than last week, and all orders booked were small lots for early delivery. Reports of considerable concessions, made by Southern furnaces, are generally denied. Prices remain as last week cash f. o. b. Chicago: Southern coke No. 2 foundry and No. 1 soft, \$13.00 to \$13.50; No. 3 foundry and No. 2 soft, \$12.50 to \$13.00.

In St. Louis the money market affected trade to a marked degree, but little buying taking place. For the last few days, however, the feeling has been better, and an improvement is expected during the coming week. Prices remain cash f. o. b. St. Louis: Southern coke No. 1 foundry, \$13.75 to \$14.00; No. 2 foundry, \$12.50 to \$12.75; gray forge, \$11.25 to \$11.75.

Louisville has thus far not been much affected by the money stringency, the trade having about the same tone as during the preceding week. It is noticeable that there are few, if any, concessions being made. Prices remain cash f. o. b. Louisville: Southern coke No. 1 foundry, \$12.75 to \$13.00; No. 2 foundry, \$11.50 to \$12.00; gray forge, \$10.50 to \$10.75.

In Cincinnati there has been less buying than during the preceding week, but the tone of the market remains firm, and there is a growing tendency among large buyers to hunt up bargain lots and figure on iron for future delivery. The steady reduction of stocks would have brought about much heavy buying before now had it not been for the uneasy feeling in financial matters. Prices are cash f. o. b. Cincinnati: Southern coke No. 1 foundry, \$13.25 to \$13.50; No. 2 foundry and No. 1 soft, \$11.75 to \$12.25; gray forge, \$10.75 to \$11.00.

The Carnival at Columbia, S. C.

Columbia, S. C., has this week held its annual spring carnival, which was full of entertainment and largely attended.

Columbia is showing a spirit of enterprise that is carrying it rapidly to the front. Having unusual advantages, it is letting them be known, and in a practical business way, as the advertising columns of the MANUFACTURERS' RECORD show.

Completing the finest water-power in the South, and ahead of best water-powers of the North, it has a splendid electric plant in successful operation with it, and a 30,000-spindle cotton ducking mill in process of construction, while this superb water-power invites factories of every kind.

It has a fine electric car line built and

in use, and is considering a superb hotel for its winter tourists.

The carnival just closed has drawn a host of people to see its fine advantages.

Southern Bank Changes.

Recent changes in Southern banks are as follow:

First National Bank, Ballinger, Texas. J. A. Younger, president, in place of W. S. Davis.

First National Bank, Greenville, Tenn. J. M. Brabson, president, in place of Newton Hacker; Newton Hacker, vice-president, in place of J. W. Willis. Groesbeeck National Bank, Groesbeeck, Texas. J. P. Morris, vice-president, in place of T. K. Stroud.

First National Bank, Farmersville, Texas. A. N. Neatherly, president, in place of E. H. Pendleton; W. S. Aston, vice-president, in place of A. N. Neatherly; W. M. Windom, cashier.

First National Bank, Dublin, Texas. W. B. Davis, cashier, in place of C. L. Pendleton.

First National Bank, Cisco, Texas. C. H. Fee, president, in place of J. H. Holcomb; John F. Patterson, vice-president, in place of C. H. Fee.

Dorchester National Bank, Cambridge, Md. James Wallace, vice-president, in place of J. H. Houston.

Clay National Bank, Clay City, Ky. Charles Scott, vice-president; J. F. Scott, cashier, in place of Frank B. Russell.

Third National Bank, Columbus, Ga. J. W. Murphy, assistant cashier.

Comanche National Bank, Comanche, Texas. Frank M. Brown, vice-president, in place of J. R. Thomas.

City National Bank, Corsicana, Texas. A. C. Sloan, vice-president, in place of S. D. Curtis.

Gainesville (Texas) National Bank. H. R. Eldridge, cashier, in place of W. J. Scott.

The Texas Road Law.

Among the various laws passed by the Texas legislature at its recent session was one relating to roads, the chief feature of which is authorization of the issuance of county bonds for road purposes. The law is made to apply only to the counties of Cameron, Harris, Fayette, Dallas, Brazos, Coryell, Bexar, Rockwall and Ellis, giving to the county commissioners the general rights of eminent domain, including draining and ditching necessary for the building of public roads. It authorizes them by a resolution to fix an election at which a majority of the property holders of the county shall decide either for or against the issuance of county bonds for road-building purposes. Only property holders are allowed to vote. If a majority of these decide in favor of the road bonds, it shall be the duty of the commissioners to issue bonds bearing not exceeding 5 per cent. annual interest and redeemable in not less than ten or more than forty years. These shall not be sold for less than their par value, and shall not amount to more than a levy of fifteen cents upon the \$100 property valuation as will yield sufficient revenue to pay interest as it accrues and a sinking fund sufficient to pay the principal at maturity. The commissioners are prohibited from using the funds derived from the sale of the bonds or the tax levied for any other than their prescribed uses. It is provided that the State board of education shall purchase these bonds under the same conditions that it now invests the school fund in other county bonds. All roads and bridges built under this act are required to be constructed under the supervision of a competent civil engineer, the commissioners being directed to employ the county surveyor or some other competent person for the purpose. This act became a law without the executive signature.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Choccolocco—Paint Works.—The Bauxite-Aluminum Paint Co., recently reported (under Birmingham), has organized and established its mill at Choccolocco. O. Cost is president; G. C. Bain, vice-president, and M. Haupt, secretary and treasurer.

Heflin—Gold Mine.—J. F. Hilton will develop a gold mine near Heflin.

Oneonta—Canning Factory.—John H. Donehoo has organized the Oneonta Canning Co. to establish a cannery. The capital stock is \$200.

Selma—Furniture Factory.—R. Coe and John Wilson contemplate building a furniture factory.

Talladega—Cotton Mill.—A company has been formed for the purpose of erecting a cotton mill.

ARKANSAS.

Daleville—Saw Mill.—The Arkadelphia Lumber Co. has put new machinery in its saw mill.

St. Francis—Manufacturing.—S. D. Kimball and others have incorporated the Bradford Manufacturing Co. with a capital stock of \$500.

FLORIDA.

Fort Meade—Phosphate Mines.—W. W. Gordon & Co., of Savannah, Ga., have purchased 240 acres of phosphate lands near Fort Meade and will develop same.

Jacksonville—Bottling Works.—The Anheuser-Busch Brewing Association, of St. Louis, Mo., will establish bottling works in Jacksonville.

Jacksonville—Packing-houses.—Geo. B. Usner and associates intend to build large orange packing-houses. F. J. Kennard, of Orlando, is now preparing plans for the buildings.

Lake Worth—Canning Factory.—A \$50,000 stock company has been formed to erect a canning factory. Geo. R. Davis, of Chicago, is president; Geo. B. Swift, vice-president and manager, and D. F. Flannery, secretary and treasurer.

GEORGIA.

Americus—Cotton Mill.—The cotton-mill company recently reported as being organized has chartered as the Sumter Cotton Manufacturing Co., with a capital stock of \$200,000. The incorporators are Abe Ryttengburg, W. M. Graham, A. S. Brown, Altamont Moses and others.

Americus—Fence Factory.—Matthews & Lewis have added to their East End Variety Works a factory for the manufacture of a patent fence made of wire and palings.

Blackshear—Cotton Mill.—A cotton-mill company may be formed in Blackshear. A. P. Brantley can inform.

Cuthbert—Cotton Mill.—Collins & Trotter, of North Carolina, have acquired the Cuthbert Cotton Mill and will operate it. Considerable new machinery will be added.

Macon—Dock.—The city may build a dock. The Board of Trade is interested.

Montezuma—Saw Mill.—O. F. Dixon will rebuild his recently burned saw mill.

Savannah—Manufactury, etc.—The Sternberg Jewelry Co. has been incorporated with a capital stock of \$25,000 for the purpose of manufacturing and dealing in jewelry. The incorporators are J. Cohn and S. Lindenborn, of New York city, and M. Sternberg, of Savannah.

KENTUCKY.

Louisville—The Fruit Growers' Co. has been incorporated with a capital stock of \$200.

Louisville—Manufacturing.—The G. P. Vicken Manufacturing Co. has been incorporated to

manufacture ornamental moldings, etc., with a capital stock of \$4000.

Louisville—The Manchester (Tenn.) Kennel Co. has been incorporated with a capital stock of \$6000.

Maysville—Tobacco Factory.—Efforts are being made to secure a tobacco factory. M. C. Russell can give information.

Newport—Meat Company.—Joseph Hewling, Chas. T. Riley, John Britton and Philip D. Riley have incorporated the John Britton Meat Co.

LOUISIANA.

Allemands—Saw Mill.—Frank Christen & Co. have built a saw mill.

Lake Charles—Foundry and Machine Shop.—A. Ellis has put a new lathe and boiler in his foundry.

Monroe—Plumbing.—The Monroe Plumbing Co., Limited, has been chartered with a capital stock of \$10,000. The first board of directors is William E. Hawks, S. B. Hawks, Geo. D. Chapple and W. A. Bright.

Mooreland—Sugar Mill.—Wheaton & Weems will put in a new three-roller cane mill on the Emfield plantation.

New Orleans—Mercantile.—The Williams-Richardson Co., Limited, has been incorporated to deal in dry goods. Alter G. Tebo is president; George A. Williams, vice-president, and Arthur A. Castaneda, secretary and treasurer, and its capital stock is \$125,000.

New Orleans—Manufacture Electrical Appliances.—Isaac Kinsey is president; Chas. K. Hall, vice-president, and W. B. Lillard, secretary, of the Signal Alarm Co., Limited, reported last week as chartered. The capital stock is \$10,000.

New Orleans—Soap Factory.—The J. J. Weis Manufacturing Co. has been incorporated with a capital stock of \$25,000 for the purpose of manufacturing soaps and kindred products. J. J. Weis is president; Gus Pitot, vice-president, and Paul M. Schneidan, secretary.

Poitev Coupee—Sugar Mill.—P. F. Bourgeois & Son are greatly improving their sugar mill by the addition of new rollers and other machinery.

MARYLAND.

Avalon—Bridge.—A toll-bridge will be built across the Patapsco river between Avalon and the Thomas viaduct by the Elk Ridge Bridge Co., which is composed of Chas. Marshall, Richard Cromwell and others. The bridge is to cost \$65,000.

Avondale—Flour Mill.—Samuel H. Reifsneider will rebuild his flour mill reported in this issue as burned.

Baltimore—Harness Factory.—O. F. Day & Son, whose harness factory was damaged by fire last week, will resume operations immediately.

Baltimore—Lumber Company.—Edw. W. Taylor, Wm. S. Taylor, Jr., Wm. L. Rowe, Frank R. Biedler, Chas. E. Eichman and Lewis L. Clogg have incorporated the Baltimore Lumber Co. with a capital stock of \$10,000.

Hebbville—Canning Factory.—The Asbestos Canning Co., recently reported (under Baltimore) as chartered, will establish its factory near Hebbville.

Middleburg—Flour Mill.—Mr. Walden is erecting a flour mill of 10 barrels capacity daily.

Princess Anne—Basket and Crate Factory.—The Princess Anne Manufacturing Co. has been organized with a capital stock of \$30,000 for the purpose of establishing a basket and crate factory. Robt. F. Brattan, H. Filmore Lankford, Robt. F. Maldox, Roger Woolford and Thos. H. Bock are the first board of directors, and will employ over 200 men.

MISSISSIPPI.

Biloxi—Canning Factory.—The erection of a cannery factory is to be built.

Coles—Saw Mill.—J. T. Daniel & Son have put in a new carriage set and feed works.

Ellisville—Saw Mill and Dry-kiln.—Williams & Russell will rebuild their saw mill and dry-kiln that were recently destroyed by fire.

Handsboro—Saw Mill.—J. M. Stiglets has built a new saw mill near Handsboro.

Meridian—Dry-kiln Works.—The Globe Dry-kiln Co. has increased its capital stock \$10,000 and will enlarge its facilities for manufacturing dry-kilns. Wm. Graham has secured the co-operation of John Kamper, of Enterprise, and G. W. Kamper, of Hattiesburg, in the proposed enlargement.

Scooba—Planer, etc.—Guy Jack is putting in a new planer and resaw.

Summit—Saw Mill.—The East Union Mills will rebuild its sawing plant reported in this issue as burned.

NORTH CAROLINA.

Burlington—Cotton Mill.—The Lakeside Cotton Mills are putting in new machinery.

Democrat—Flour Mill.—Z. J. Carter & Co. are

building a roller-process flour mill of forty barrels capacity daily.

Goldsboro—Grist Mill.—Frederick C. Overman has erected a grist mill.

Waynesville—Saw Mill and Woodworking Plant.—W. H. Cole, of Cherry Valley, Ark., contemplates establishing an extensive saw-milling and woodworking plant in Waynesville.

Wilkesboro—Tobacco Factory.—Welborn, Wallace & Call will start a plug and twist tobacco factory.

Winston—Tobacco Factory.—P. H. Haues & Co. will rebuild their tobacco factory reported in this issue as burned.

SOUTH CAROLINA.

Aiken—Water Works.—The city has contracted with Perry Andrews and J. W. Baum for the boring of an artesian well to supply the city with water.

Blacksburg—Manufacturing.—John F. Jones and associates will build a manufacturing plant.

Blacksburg—Factory.—Norcross, Green & Mercer are erecting a factory.

Charleston—Phosphate Company.—Morris Israel, Ernest H. Pringle, Geo. M. Trenholm and E. P. Gueran have incorporated the Rose Phosphate Co. with a capital stock of \$37,000.

Columbia—Machine Shops.—The South Bound Railroad, it is rumored, will build shops in Columbia.

Mayesville—Brick Works.—Cooper DeSchamps will establish brick works.

St. Matthew's—Cotton Mill.—A \$50,000 stock company is being formed to erect a cotton mill. M. O. Dantzler can give information.

Sumter—Cotton Mill.—Endeavors are being made to organize a company for the purpose of erecting a cotton mill. Marion Mose can give information.

Walterboro—Cotton Mill.—A company is in process of organization which purposes to erect a cotton mill. A. Weichman can give information.

Yorkville—Water Works.—The city will issue \$16,000 in bonds for the purpose of constructing a water supply. The mayor can inform.

TENNESSEE.

Bristol—Tannery and Belting Factory.—Charles A. Schieren & Co., of Brooklyn, N. Y., will establish in Bristol a tannery of 10,000 hides capacity per annum; will also manufacture leather belting.

Ducktown—Copper Mines.—The Pittsburg (Pa.) Copper Mining Co. has leased for thirty-five years the Keith copper mine at Ducktown.

Jackboro—Coal and Iron Mines, Electric Plants, etc.—H. M. La Follette, of Sterling, Mich.; R. Holt, of Indiana; E. J. Robinson, of Indianapolis; Paul Skeller, of Philadelphia, Pa.; B. H. Eno and A. E. Davis, of New York city, and others have incorporated the La Follette Coal & Iron Co. with a capital stock of \$4,500,000 and the La Follette Land & Improvement Co. with a capital stock of \$1,500,000. The companies have purchased 15,000 acres of coal, iron and timber lands in Campbell county, and propose developing same, erecting electric-mining plants, iron furnaces, coke ovens, building an industrial town, etc.

Jellico—Water Works.—The Jellico Water Works Co. has been organized and will at once construct a water works system. E. H. Utter is president; J. M. Smith, vice-president; H. K. Tramelle, secretary, and Robert Ross, treasurer.

Johnson City—Hoop Factory.—Cooper Bros. contemplate erecting a barrel-hoop factory.

Johnson City—Saw Mill.—Miller & Carmichael will erect a saw mill.

Johnson City—Tannery.—A tannery will be built by Mr. Innis and others.

Knoxville—Canning Factory.—E. U. Carroll, of Indianapolis, and M. A. Walker, of South Knoxville, are organizing a stock company for the purpose of establishing a canning factory.

Memphis—Veneer Mill.—An oak veneering mill to employ 100 men will be established. The Young Men's League can inform.

TEXAS.

Bowie—Cotton Compress.—C. H. Thompson, Harry F. Weber, Z. T. Lowrie, J. H. Matthews, W. C. Stripling and G. F. Thomas, of Bowie, and Geo. L. Casner, of Tennessee, have organized a stock company for the erection of a cotton compress. The capital stock is \$40,000.

Brownwood—Cotton Compress.—A stock company has been formed to build the cotton compress previously reported.

Conroe—Timber Company.—A. M. Carson, of Willis; Fred D. Meriam, of Kansas City, and John Wahrenberger, of Conroe, have incorporated the Texas Tie & Timber Co. with a capital stock of \$35,000.

Corpus Christi—Steam Laundry.—Charles M.

Hancock, of Fort Worth, intends to establish a steam laundry in Corpus Christi.

El Paso—Tannery.—Hugh Mackay and associates will build a tannery.

Harrisburg—Woodworking Factory.—E. M. Coglin, J. M. Mathews and D. M. Coglin have incorporated the Harrisburg Handle Co. to manufacture woodenware, etc. The capital stock is placed at \$20,000.

Hempstead—Oil Mill and Cotton Gin.—Amsler Bros. are enlarging their oil mill and erecting a new gin.

Honey Grove—Publishing.—The Honey Grove Publishing Co. has been organized with a capital of \$2000 for the purpose of publishing the *Signal*.

Hunter—Gin Company.—E. M. House, A. C. Hunter, Joseph Landa and Harry Landa have chartered the Hunter Gin Co. with a capital stock of \$10,000.

Jacksonville—Canning Factory.—The canning company recently reported as organized has chartered as the Jacksonville Fruit & Canning Co. of Galveston, the capital stock being placed at \$50,000. Lem Blum, Julius Runge, Robert Hawley, James Shipman and several others are the incorporators.

Jefferson—Flour Mill.—R. C. Hawley, Levin Perry and J. F. Quinn have incorporated the Jefferson Milling Co. to operate a flour mill. The capital stock is \$500.

Sulphur Springs—John W. Froocoe, Ben W. Smith, S. P. Manz and others have incorporated the Sulphur Springs Fishing & Boating Co. with a capital stock of \$10,000.

Waco—Grain Company.—Frank Henderson and Brook Smith, of Brownwood, and W. R. Davidson, M. Guinan and B. B. Davidson have incorporated the Texas Grain & Provision Co. with a capital stock of \$50,000.

VIRGINIA.

Alexandria—The National Contracting, Building & Paving Co. has been incorporated with a capital stock of \$50,000.

Alexandria—Publishing Company.—The Weekly News Publishing Co. has been incorporated with a capital stock of \$150,000.

Basic City—Knitting Mill.—New machinery will be added to the Basic City Knitting Mills.

Basic City—Paper Mill.—Everett, Wadding & Co., of Richmond, and J. M. Koiner, of Basic City, have purchased the Paper Fabrique Co.'s mill.

Berkley—Saw Mill.—Whispell & Denby, of Norfolk, have purchased Frey Bros.' saw mill for \$30,000, and will improve and operate it. The Interstate Timber & Lumber Co. will be organized to operate it.

Graham—Rubber-stamp Works.—The Graham Rubber Stamp Works will be established.*

Irwin—Mica Mines, Plant, etc.—The Boston syndicate that is operating the Goochland mica mines will erect complete mica-mining and working plant, etc. John N. Adams can give information.*

Mason—Lumber Company.—Jacob Mees and others have incorporated the Mees Bros. Lumber Co. with a capital stock of \$800.

Norfolk—The Children & Youths' Outfit Co. has been incorporated with a capital stock of \$10,000 for the purpose of dealing in merchandise.

Petersburg—The Weiller Co. has been chartered to deal in liquor and tobacco with a capital of \$2000.

Petersburg—The J. B. Worth Co. has been chartered to deal in ice, fuel and grain with a capital stock of \$75,000.

Portsmouth—Baking-powder Factory.—The Haynor Manufacturing Co. has been incorporated to manufacture baking powder, etc. The capital stock is \$5000.

Portsmouth—Cotton Mill.—Endeavors are being made to form a \$100,000 stock company for the purpose of building the cotton mill mentioned in our last issue. Charles R. Nash can give information.

Roanoke—Electric-light and Power Plant.—The Roanoke Electric Light & Power Co. has begun the erection of a new electric-light and power plant.

Roanoke—Carriage Manufacturing.—The Roanoke Carriage Works have been incorporated with a capital stock of \$25,000.

Scottsville—Merchandise.—The Harris Merchandise Co. has been incorporated with a capital stock of \$20,000.

Staunton—The Staunton Grocery Co. has been incorporated with a capital stock of \$25,000.

WEST VIRGINIA.

Bayard—Coal Mines and Coke Ovens.—The North Branch Coal & Coke Co., for the purpose of mining coal and manufacturing coke, has been incorporated by C. Colburn, James B. Rees, of

Rees Tannery; D. A. Eberle, of York, Pa.; F. T. Fultz, of Hagerstown, Md., and James A. Milholand, of Cumberland, Md.

Bayard—Coal Mines and Coke Ovens.—The Bayard Coal & Coke Co. has been organized to mine coal and manufacture coke. J. W. Nihiser is president, and C. D. Coburn, superintendent. The capital stock is \$500,000.

Central City—Handle Manufacturing.—Irvin Hartzel, of Guyandotte; J. L. Caldwell, B. W. Marr, F. Smith and George F. Miller have incorporated the Hartzel Handle Co. to manufacture handles.

Charleston—Window-blind Company.—D. D. Bullman, W. F. Gilliam, C. B. Heble, M. M. Wright and Rudolph B. Barky, of Baltimore, Md., have incorporated the Gilliam Automatic Window Blind Co.

Davis—Brick and Tile Works.—M. J. Wagner, C. O. Stirby, C. Grigler, C. W. Johnson and Mary Johnson have incorporated the Summit Brick & Tiling Co. to mine clay and manufacture brick and tiles.

Harper's Ferry—Manufacturing.—Clark Patterson, Henry E. Davis and John J. Malone, of Washington, D. C., have incorporated the American Annunciation Co. to manufacture and deal in hotel annunciations. The capital stock is \$500.

Matewan (not a postoffice), Logan county—Coal Mining and Coke Manufacturing.—Walter Graham, of Graham, Va.; Joseph Simkins, of Hindmarsh; Samuel Simkins and W. B. Russell, of Matewan, and E. R. Wright, of Roanoke, Va., have incorporated the Matewan Improvement Co. to mine coal and manufacture coke.

Parsons—Lumber Company.—George A. Mitchell and others have incorporated the Schaffer's Fork Boom & Lumber Co. to construct booms and dams across Pheasant run.

Ripley—Brick and Tile Works.—The Ripley Brick & Tile Co., reported last week as organized, has been incorporated by George McGraw and others.

BURNED.

Avondale, Md.—Samuel H. Reifsneider's flour mill.

Charleston, W. Va.—The plant of the West Virginia Republican; loss \$6000.

Chestertown, Md.—The Millington Academy; loss estimated \$15,000.

Summit, Miss.—The East Union Saw Mill, near Summit.

Wichita Falls, Texas—The California Hotel; loss \$6000.

Winston, N. C.—P. H. Hanes & Co.'s plug factory and R. J. Reynolds's tobacco warehouses; loss estimated \$200,000.

BUILDING NOTES.

Anniston, Ala.—Business Block.—T. L. Houser and others will erect a brick and stone business block to cost about \$7000.

Augusta, Ga.—Hotel.—The directors of the Bon-Air Hotel Co. are considering the idea of adding 100 rooms to the building.

Augusta, Ga.—Warehouses.—The Augusta Glass Co. intends building two warehouses to cost about \$7500.

Baltimore, Md.—The Merchants and Manufacturers' Association will aid the Auditorium Co. in raising funds to complete the new music hall.

Beltsville, Md.—Church.—Congregation of the Methodist church will build a new edifice.

Biloxi, Miss.—J. R. Harkness & Sons are constructing a 16-room hotel and an oyster packing-house to contain 11,000 square feet of floor space.

Columbia, S. C.—Hospital.—A charter has been issued to Henry A. Green and others to erect a hospital for colored people.

Easton, Md.—Church.—A committee has secured funds for a Methodist church at Easton. Address the pastor.

Elizabethhton, N. C.—The Bladen county courthouse will cost \$7573. Contract has been let.

Gainesville, Texas.—The Santa Fe will construct a \$6000 depot at Gainesville.

Hagerstown, Md.—Church.—Congregation of Zion Reformed Church will build a stone church to cost about \$11,000.

Honey Stone, Texas—House.—W. Underwood will build a large residence of brick and stone.

Hot Springs, Ark.—Pythian Building.—The Knights of Pythian think of raising a fund for a \$250,000 building at Hot Springs.

Jacksonville, Fla.—Storage-house.—The Anheuser-Busch Brewing Co. will erect a three-story warehouse and bottling plant to cost \$25,000.

Ladonia, Texas—Church.—Contract has been let for the proposed Methodist church.

Lake Charles, La.—Hotel.—F. W. Joliet contemplates building a 100-room hotel, also a market-house.

Laredo, Texas—Jail Addition.—The county jail will be enlarged at a cost of \$3642.

Lexington, S. C.—The Baptists and Lutherans are raising funds to erect churches at Lexington.

Lockhart, Texas—Courthouse.—Martin, Byrnes & Johnson agree to complete the new courthouse in nine months.

Lynchburg, Tenn.—Jail.—The Pauly Jail Building Co., of St. Louis, will construct the Lynchburg jail. It will cost \$58,000.

Nashville, Tenn.—Temple.—Masons will build a temple fifty by eighty feet with stores on ground floor. It will be constructed of brick and will cost \$5000. Address W. W. Turner.

Nashville, Tenn.—Temple.—The Pythian temple proposed at Nashville, Tenn., will cost \$100,000. It will be 50x180 feet and eight stories high. Five floors will be used for flats, two stories for stores, one floor for lodge-rooms, etc.

New Orleans, La.—Church.—The congregation of Prytania Street Presbyterian Church may build a new edifice.

Pocahontas, Va.—Public Buildings.—The corporation will erect a courthouse and jail, also a fire-department house.

Portsmouth, Va.—Church.—Trinity Church is to be enlarged and improved.

Radford, Va.—Hotel.—Plans have been prepared for a hotel at Radford to replace the burned structure, to cost \$30,000.

Richmond, Va.—Armory.—A building for a cavalry armory will be erected at Richmond. Address W. E. Cutshaw.

Roanoke, Va.—Office Building.—Work has commenced on the building for the Fidelity Loan Co.

Roanoke, Va.—Business Block.—M. C. Burk will erect a \$6000 business block at Roanoke.

Spencer, W. Va.—Hospital.—The contract for building the addition to the insane hospital has not as yet been awarded. The bids are more than the estimate.

Strasburg, Va.—Depot.—General Manager Odell writes that the Baltimore & Ohio is considering the building of a new depot at Strasburg.

Texarkana, Ark.—Courthouse.—The Miller county courthouse at Texarkana will be of pressed brick and stone and will cost about \$40,000.

Vicksburg, Miss.—School.—An addition is to be made to the Main-street schoolhouse in Vicksburg. Address Wm. Stanton.

Victoria, Texas—Church.—Episcopalians intend building a church at Long Matt, Texas. Address Rev. A. W. Burroughs, Victoria.

Victoria, Texas—Opera-house.—Alber & Redmond will build the Victoria opera-house which will cost \$15,000.

Walnut Cove, N. C.—Depot.—The Yadkin Valley depot, recently burned at Walnut Cove, will be rebuilt.

Washington, D. C.—Market-house.—Plans have been prepared for a market-house at Sixth and H streets to cost \$100,000. It will be 95x146 feet, with an auditorium above 65x98 feet.

Washington, D. C.—Robert Boyd will erect a six-story apartment house to contain sixty rooms at Eighteenth and H streets. The first floor will be used for a cafe and parlors. It will cost \$40,000. Louis H. Emmert will build a three-story stone residence to cost \$25,000. F. I. Gregory & Co. will erect nine three-story houses on Twelfth street southeast to cost \$20,000. Plans have been prepared by M. B. Gray for an office building on F street, next to the Mertz Building.

Winston, N. C.—Church.—Plans have been prepared for the proposed Baptist church.

Winston, N. C.—Bank Building.—The Wachovia Loan & Trust Co. will build a one-story banking office of granite and gray brick with vaults.

Yorkville, S. C.—Courthouse Repairs.—The Spratt Machine Co. will repair the York county courthouse for \$9974.

RAILROAD CONSTRUCTION.

Railroads.

Carencro, La.—The Teche Railway & Sugar Co. has surveyed a line from Carencro, in Acadia parish, to the Bayou Teche, a distance of about thirty miles.

Denison, Texas.—The Denison & Washita Valley Railroad Co. is completing a branch three miles long from Denison to the Missouri, Kansas & Texas at Warner. It has built several miles of sidings around Denison.

Ellicott City, Md.—The Baltimore & Ellicott City Electric Railway Co. is negotiating for right of way between Ellicott City and Clarkson, Md.

Hagerstown, Md.—Eight miles of right of way for the new extension of the West Virginia Central west of Hancock, Md., have been purchased.

Henrietta, Texas.—It is reported that the Missouri, Kansas & Texas will be built from Henrietta to Luxenburg at once.

Jacksonville, Fla.—A dummy line is proposed to be built between Jacksonville and Havana City.

Newcastle, Va.—The Iron Gate Furnace Co. intends building a three-mile narrow-gage road to connect its mines with the Craig Valley road.

Pensacola, Fla.—The Pensacola Terminal Co. will extend its railway to Fort Barrancas at once.

Williams, Ark.—The Williams & Current River line, mentioned recently, is now being built from Palatka, Ark., to the Current river.

Street Railways.

Asheville, N. C.—The Montford avenue electric line has been sold to the Asheville Loan & Improvement Co. They will extend it to the French Broad river.

Baltimore, Md.—The North avenue division of the City & Suburban electric road between Greenmount avenue and Belair road has been opened for business.

Charleston, W. Va.—F. B. Enslow has applied to the city council for the right to build an electric railway system in the city.

Columbus, Ga.—President Flourney, of the Columbus Railway Co., writes that the company is now negotiating to put the electric system on its roads.

Frederick, Md.—The board of aldermen have granted a franchise to the Frederick & Middle-town Electric Co.

Hot Springs, Ark.—It is understood that the Hot Springs electric line will be extended to Oak Lawn and the Ouachita river, four and a-half miles.

Knoxville, Tenn.—Work of stringing wires for the Knoxville electric road will be begun in a few days. Contract for motors has been awarded.

Mobile, Ala.—Work has begun on the trolley system for the Mobile Street Railway Co.'s lines.

Waco, Texas.—The Waco Electric Railway Co. will add two miles of track to its lines.

MACHINERY WANTED

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Asbestos Machinery.—John N. Adams, Irwin, Va., wants proposals on a plant for treating asbestos.

Brick and Tile Works.—John N. Adams, Irwin, Va., wants proposals on a brick and tile plant.

Cars.—The Gulf, Beaumont & Kansas City Railway, Houston, Texas, will want 100 freight and logging cars, two passenger coaches, a mail coach and a baggage coach.

Cars.—The Macon & Indian Spring Railway Co., Macon, Ga., wants two open cars. Address J. H. Hertz, secretary.

Crusher.—Joseph F. Allison, Calhoun, Ga., wants a second-hand Ebaugh crusher in good condition.

Electric-light Plant.—D. M. Crosthwait, Kyle, Texas, wants bids on electric-light plant for city of 5000 inhabitants. For plans and specifications address above.

Electric-light Plant.—James M. Graham, Gainesville, Fla., wants estimates on an electric-light plant complete with two No. 8 Edison dynamos, capacity 720 sixteen candle-power lamps; two 25-light 2000 candle-power arc lights, with ampeire meter, wall controls; two rheostats, lightning arresters and switchboards, two pressure indicators, four miles of wire for circuit, thirty 200 candle-power lamps (type M); two miles of wire for incandescent line, etc. Want only Edison incandescent system and Thomson-Houston arc system.

Electric-light Plant.—The city of Crowley, La., is in the market for an electric-light plant to be operated in connection with water works. Address L. S. Scott.

Electric Motors.—The Waco Electric Railway & Light Co., Waco, Texas, will buy two motor cars.

Grinding Plant.—John N. Adams, Irwin, Va., wants proposals on a plant for grinding mica.

Knitting Mill.—Gardner & Jeffress, Warrenton, N. C., want estimates on cost of knitting mill.

Lathe.—The Arkansas Electric Supply Co., Little Rock, Ark., is in the market for a No. 6 Barnes foot-power lathe, with attachment.

Lime-kilns.—John N. Adams, Irwin, Va., wants estimates on a plant for burning lime.

Locomotives.—The Gulf, Beaumont & Kansas City Railway, Houston, Texas, will want two new locomotives. Address John H. Kirby, general manager.

Mining Plant.—John N. Adams, Irwin, Va., wants estimates on a mining plant, including pumps, hoists, engines, track, etc.

Piping.—D. C. Quinn, Keyser, W. Va., wants

several hundred tons of four, six and eight-inch pipe for water works.

Rails.—R. J. Fisher, Athens, Tenn., desires to purchase forty to fifty tons of 20-pound second-hand steel rails. Quote the lowest cash figure for them and give their condition.

Rails.—The Waco Electric Railway & Light Co., Waco, Texas, will buy two miles of rails.

Reduction Plant.—John N. Adams, Irwin, Va., wants proposals on a plant for reducing spars and quartz for pottery use.

Rock Drills.—The Carolina Brown Stone Co., Raleigh, N. C., wishes to purchase an Ingersoll baby drill at second hand, one and three-quarter inches or two inches; also a three-and-one-eighth or three-and-one-half-inch Ingersoll drill. Correspond with J. W. Hinsdale, president.

Rubber-stamp Outfit.—The Graham Rubber Stamp Works, Graham, Va., wants complete supplies (except type) for rubber-stamp works.

Sulphur Plant.—John N. Adams, Irwin, Va., wants proposals on a plant for the treatment of anniferous sulphides.

Water Works.—D. M. Crosthwait, Kyle, Texas, wants bids on water works for city of 500 inhabitants. Plans and specifications on application.

Daniel Shea & Co., of Memphis, Tenn., want to correspond with manufacturers of hand-made hammer handles.

Mr. O. V. Waggoner, of Gretna, La., wants prices and description of a second-hand hand fire engine, with or without hand rope. If engine is not in thorough order and repair state what repairs are needed. A low price might secure a sale.

W. H. Sutcliffe, 33 Calhoun street, Charleston, S. C., wants to correspond with manufacturers of veneering, as he desires to have some cut from bird-eye maple wood.

SOUTHERN FINANCIAL NEWS.

New Banks.

Abbeville, Ala.—A lumber road to connect with the Alabama Midland is being built from Abbeville.

Atlanta, Texas.—The First National Bank of Atlanta has been organized with \$50,000 capital. H. A. O'Neal is president; J. G. James, first vice-president, and J. W. Campbell, cashier.

Camden, S. C.—The Bank of Camden will increase its capital from \$25,000 to \$100,000.

Charleston, W. Va.—The grading of the Kanawha & Michigan road is completed. Rail-laying has begun.

Conway, S. C.—A commission has been issued to the Bank of Conway with a capital of \$25,000.

Fayetteville, N. C.—The Co-operative Bank of North Carolina, with a capital of \$500,000, has opened for business at Fayetteville. John P. Coffin is president.

Fort Worth, Texas.—Stock Yards National Bank to be organized at Fort Worth expects to begin business July 1.

Marion, Ala.—There is a movement on foot to organize a new bank at Marion.

Tallahassee, Fla.—Work has begun on the Carrabelle, Tallahassee & Gulf road, which is to connect with another part of the line now completed at Sapchoppay, thirty-six miles distant.

Washington, D. C.—The Pennsylvania will build a road three miles long from Long Bridge to Roslyn, Va., and erect a freight station at Roslyn.

West Union, W. Va.—The Bank of West Union has been organized for business.

Atlanta, Ga.—Fulton county will issue \$180,000 in bonds to complete the city water works.

Augusta, Ga.—The Augusta Real Estate Co. has declared a semi-annual dividend of 3 per cent.

Baltimore, Md.—The power-house of the City & Suburban Railway Co. will have electrical machinery of over 600 horse-power.

Baltimore, Md.—The City & Suburban Railway Co. offers \$300,000 in gold bonds for sale at 102½ flat.

Burnet, Texas.—W. H. Wes fall & Co. will conduct the business formerly transacted by the First National Bank. The latter's directors have given up the national banking system.

Carrollton, Ga.—An election to decide on issuing \$20,000 in bonds for the proposed courthouse will be held July 15.

Covington, Ky.—The Covington Trust Co. cleared 6 per cent. on its capital during the past year.

Crisfield, Md.—The Somerset Savings Association has been formed with Dr. William F. Hall as president.

Denton, Texas.—The City Building & Loan Co. has been chartered with \$50,000 capital.

Ei Paso, Texas.—The city advertises for bids on \$25,000 worth of water works construction bonds.

Galveston, Texas.—The South Galveston &

[May 26, 1893.]

Gulf Shore Railway Co. has ordered an issue of \$375,000 first mortgage 6 per cent. gold bonds.

Georgetown, S. C.—The Bank of Georgetown will increase its capital from \$50,000 to \$100,000.

Griffin, Ga.—The county commissioners will be asked to hold a bond election to decide about building the courthouse. The proposed issue is \$35,000.

Hagerstown, Md.—The Hagerstown Light & Heat Co. has declared a semi-annual dividend of 3 per cent.

Knoxville, Tenn.—Charges of extravagance and mismanagement made against the directors of the Southern Building and Loan Association, one of the largest in the South, have been investigated and found to be entirely without foundation.

Ladonia, Texas.—The Ladonia Cotton Oil Co. has declared a 15 per cent. cash dividend.

La Grange, Ga.—The Troup Factory has declared a semi-annual dividend of 3 per cent.

London, Eng.—Stock of the West Virginia Land Development, Mining & Railway Co. has been registered for investment.

Macon, Ga.—The Macon & Indian Spring Railway Co. now has four and a-half miles of line in operation, and is building two and one-fifth miles more.

Morristown, Tenn.—An election to decide on issuing \$30,000 in bonds to build the Unaka & Nolachucky Railway will be held June 30.

New Orleans, La.—The Crescent City Railroad Co. will consider a proposition from the New Orleans Traction Co. to buy its franchises. The terms are a guaranteed 5 per cent. dividend, \$3,000,000 in bonds and \$850,000 stock.

Norfolk, Va.—The finance committee of Norfolk will receive bids at the office of the treasurer of that city until noon of June 5 for \$100,000 30-year 5 per cent. coupon bonds of \$500 each, due April 1, 1923.

Radford, Va.—Logan M. Bullitt has been re-elected president, and W. H. Galway, cashier, of the Radford Trust Co.

Rome, Ga.—A syndicate headed by J. L. Camp has bought a controlling interest in the Rome Electric Light Co.

San Antonio, Texas.—The Citizens' Street Railway Co. will begin construction of an electric road in San Antonio at once.

Savannah, Ga.—The next meeting of the State Bankers' Association will be held on June 8.

Spartanburg, S. C.—The Home Building & Loan Association has been chartered. The president is A. H. Twitchell.

Tampa, Fla.—The electric system of the Tampa Street Railway Co. has been completed and is now in operation.

Wheeling, W. Va.—At the annual meeting of the West Virginia Natural Gas Co. the following directors were chosen: J. N. Vance, J. G. Hoffman, Sr., Louis C. Stifel, C. W. Batchelor, John Pitcairn, J. J. Vandergrift, Henry Fisher, J. I. Buchanan, Joseph W. Craig and S. H. Vandergrift.

Wilmington, N. C.—The depositors of the First National Bank will receive 90 per cent. in all of their money.

Yorkville, S. C.—The corporation has voted to issue \$16,000 in bonds to construct water works.

TRADE NOTES.

THE Gleason & Bailey Manufacturing Co., Seneca Falls, N. Y., are building a hand hose carriage for Tonawanda, N. Y., and a two-horse hose carriage for Newport, R. I.

THE E. D. Albro Co., Cincinnati, Ohio, is sending out samples of its fine work in veneers to the trade. The samples show an excellent quality and attractive coloring. Some of the veneers are birch, oak, bird's-eye maple, blister maple, in different thicknesses.

THE exhibit of E. C. Atkins & Co., Indianapolis, Ind., at the Columbian Exposition, can be found in machinery hall, machinery annex, section 14, column G 134. Mr. White has charge of the exhibit and will take pleasure in giving all the information desired.

G. W. FRAZIER, of Allegheny, Pa., inventor of the new water-gas generator, has a continuous regenerative heating furnace which has been passed on favorably by some of the largest iron and steel manufacturers of the country. The furnace is reversible or can be built with straight draft for coal fuel and regain heat continuously.

The city of South Bend, Ind., where N. P. Bowsher, the manufacturer of ready dressed mill cogs and other specialties is located, has exceptional facilities for shipping. Mr. Bowsher can now ship by the United States, Pacific, Baltimore & Ohio, American, Adams, Southern, Great Northern, North Pacific and National express lines.

THE Vilter Manufacturing Co., of Milwaukee, Wis., has closed contract with the Minneapolis General Electric Light Co. for a 1000 horse-power

cross compound Corliss engine; with the Crocker Chair Co., of Sheboygan, Wis., for a 500 horse-power cross compound Corliss engine, and has also closed contract with parties in Mexico for a ton refrigerating plant.

THE Penberthy Injector Co., of Detroit, Mich., reports that it again has its machinery in motion after a delay of ten days, occasioned by a fire at its factory on May 9, at which time its entire third floor and roof were burned and the stock and machinery on two first floors badly damaged by water. Over fifty carpenters, masons, plumbers, roofers and steam fitters have put in shape in seven days (three used in insurance adjustment) what looked to be a month's work after the fire. It is now prepared to fill orders as usual.

THE exhibit of the Jeffrey Manufacturing Co., of Columbus, Ohio, in the mines and mining department, covering as it does over 1500 square feet of floor space, will be of interest to all mine operators visiting the World's Fair. Both its electric and air machines will be shown in operation in connection with a coal bank specially gotten up for the fair, so that coal men can see them in operation without going to a coal mine. The Jeffrey Company has secured continuous power, so that its exhibit will be a live one in the charge of men fully posted on mine equipments. It invites all interested to make headquarters there.

THE shipments by the Metallic Drawing Roll Co., Springfield, Mass., last week from its roll works at Indian Orchard included seventy-two deliveries of drawing for the Saratoga Victory Mills, N. Y., and a large number for the Reading (Pa.) Mills, Loraine, of Pawtucket, R. I.; Rotch and Howland Mills, of New Bedford; Grant Mills, of Fitchburg, and West Point Manufacturing Co., West Point, Ga. The company is finishing up orders for the New Bedford Manufacturing Co., the Howland Mills and Rotch Spinning Co., all of New Bedford. A fine repeat order has just been placed for the metallic roll by William E. Hooper & Sons, Baltimore, for the various mills operated by the Woodberry Manufacturing Co.

TRADE LITERATURE.

THE Mountain Electrical Manufacturing & Construction Co., Meyersdale, Pa., issues a neat little prospectus relative to its work. One of its specialties is a dynamo electric generator for supplying any desired current or doing any kind of work. These machines can be supplied at short notice, and the company is prepared to put in arc and incandescent-lighting plants complete under the most improved systems.

THE Cincinnati Milling Machine Co. has sent out a very handsome series of plates illustrating its principal machines. The cuts give an excellent idea of the No. 3, No. 4 and No. 1 universal tool-room milling machines, No. 5 heavy and No. 1 plain machines. They are intended for the different classes of work, are compactly and strongly built, and the parts are accurately fitted together. They also have a number of improved attachments. The Cincinnati Milling Machine Co. also has a cutter and tool grinder which is adapted to a great variety of purposes.

EVERYONE knows that the manufacture of wire designs has made remarkable strides of progress in the last few years, but a book just published by the Ludlow-Saylor Wire Co., of St. Louis, Mo., will astonish even experts in this industry, so many and so artistic are the designs which it elaborates. The Ludlow-Saylor Company is one of the oldest and most progressive in the country, and its last prospectus gives an idea of what can be accomplished in wire work. Wire gates and fences are but a small part of it. Illustrations are noted of screens, balustrades, easels, window ornaments, lamp brackets, railings for steps, balconies, etc. Bank and office work of the strongest yet most ornamental character is also shown. The company has an electroplate plant, where its work can be finished in bronze, copper or silver, bright or oxidized. By a dipping process different hues of art metal can be produced.

NOTICE TO CONTRACTORS.

KNOXVILLE, TENN., May 23, 1893.
The Board of Public Works of the city of Knoxville, Tennessee, invites Sealed Proposals for Paving with Brick about forty-six (46) thousand square yards of streets, according to the plans and specifications on file in the office of the city engineer of said city, printed copies of which will be furnished to bidders upon application. The Proposals will be received and opened by the Board of Public Works in the Council Chamber at the City Hall in said Knoxville, Tenn., at two (2) P. M. Thursday, the eighth (8) day of June, 1893. Each Proposal must be accompanied by a certified check for five thousand (\$5000) dollars, payable to the Board of Mayor and Alderman of the city of Knoxville, as surety of good faith to enter into contract if the work is awarded. All proposals must be upon blanks, which will be furnished by the Board of Public Works, and in sealed envelopes addressed to the Board of Public Works, Knoxville, Tenn., and endorsed on the outside "Proposal for Brick Paving." Plans and specifications can be seen at the office of the city engineer after May 29, 1893. The city distinctly reserves the right to reject any and all bids. JOHN GLEASON, Chairman. By order of the Board of Public Works.
M. NICHOLSON, City Engineer.

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WORLD'S FAIR NOTES.

A Few Pointers About Chicago.

As a great many readers of the MANUFACTURERS' RECORD will make their first trip to Chicago during the World's Fair, a few pointers regarding the geography of the city will be appreciated. In the first place, fix firmly in your mind the fact that Lake Michigan forms the eastern boundary of the entire city, and if you stand facing the lake with both arms outstretched the left hand will point to the North Pole and the right hand will point straight down the tracks of the Big Four Route to the southern end of the city. Paste this in your hat and you have the key to the entire situation. Coming into Chicago on trains of the Big Four Route, which is the only railroad having an entrance on the south side along the lake front, where all the hotels and boarding-houses are located, you will find yourself passing practically through the Exposition Grounds and a magnificent panoramic view of the Fair is obtained.

At the World's Fair Station of the Big Four Route, if you step off at the right side, you are at the entrance gate to the Exposition, and can begin "doing" the Fair at once; if you step off at the left side you will find yourself in the finest residence portion of Chicago, and right in the midst of the World's Fair hotel and boarding-house district. The chances are ten to one you will be within a few minutes' walk of the very place you have selected for your headquarters.

If you prefer to go down town, ten minutes' ride will bring you to the new Twelfth Street Station in the heart of the city. Now bear in mind the manifest advantage of entering Chicago on the Big Four Route. In the first place, you avoid entirely the bother and trouble of a tedious transfer across the city, which is necessary via all other lines, being landed directly at the Exposition Grounds, an advantage offered by no other line, and in the second place, you can so fix the geography of the city in your mind that you will at once become as familiar with Chicago as you are with your own town.

Another point in favor of the Big Four Route is found in the fact that if you enter Cincinnati on the Queen & Crescent Route, Louisville & Nashville Railroad, Kentucky Central Railway, Baltimore, Chesapeake & Ohio Railway or Baltimore & Ohio Southwestern Railroad, connection is made in Union Depot, avoiding the disagreeable transfer necessary via all other lines. For full information address D. B. Martin, General Passenger Agent, Cincinnati. +

THE WORLD'S FAIR.

Final Arrangements for the Sale of Tickets via the B. & O. R. R.

For the benefit of those desiring to attend the World's Fair the Baltimore & Ohio Railroad will sell excursion tickets to Chicago and return at all stations on its line at low rates. Tickets will be on sale until November 1, and will be valid for return journey until November 15, 1893. They provide for a reduction of 20 per cent. below regular rates. These tickets will be valid only for continuous journey. Tickets at higher rates will be sold that will permit holders to stop over at Baltimore, Washington or any other point going and returning.

Besides the opportunity of visiting Washington, a privilege afforded by no other route, tourists via the Baltimore & Ohio Railroad will traverse the historic Potomac Valley, the theatre of the war between the States. At Cumberland they will be offered a choice of routes, via Pittsburg or across the Allegheny Mountains, 3000 feet above the level of the sea, and via Deer Park and Oakland, the famous summer resorts. The scenery along the Baltimore & Ohio route is the most picturesque in America. Pullman accommodations may be reserved in advance of journey. For rates and information apply to nearest B. & O. ticket agent or Chas. O. Scull, General Passenger Agent, Baltimore, Md. +

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.